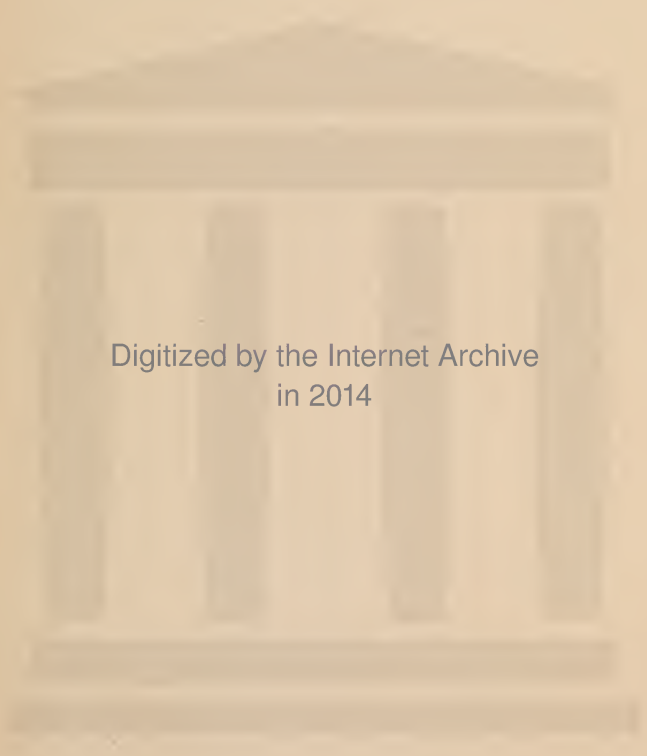


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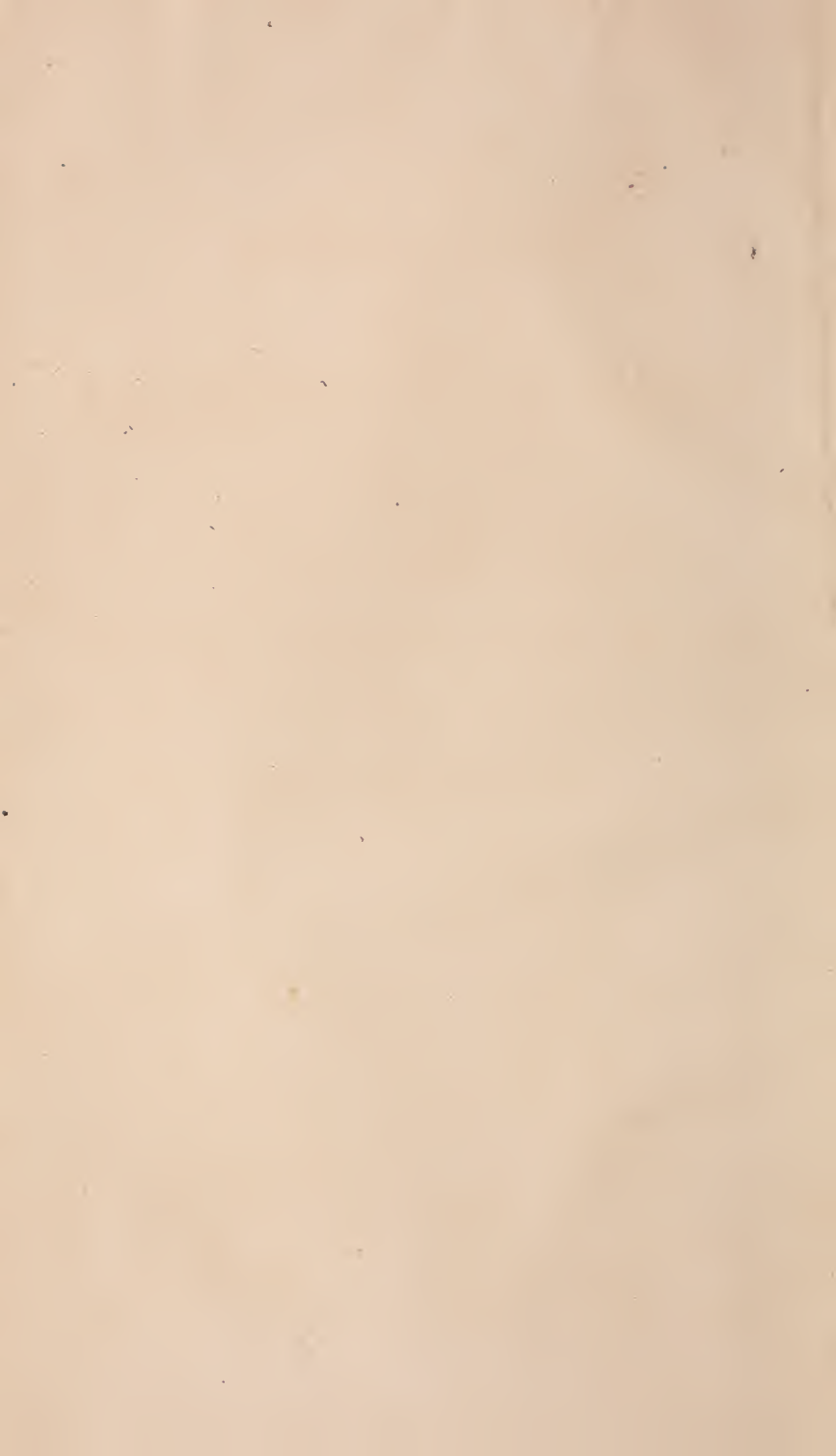
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EDITED BY

S. S. PURPLE, M.D., STEPHEN SMITH, M.D.,

AND

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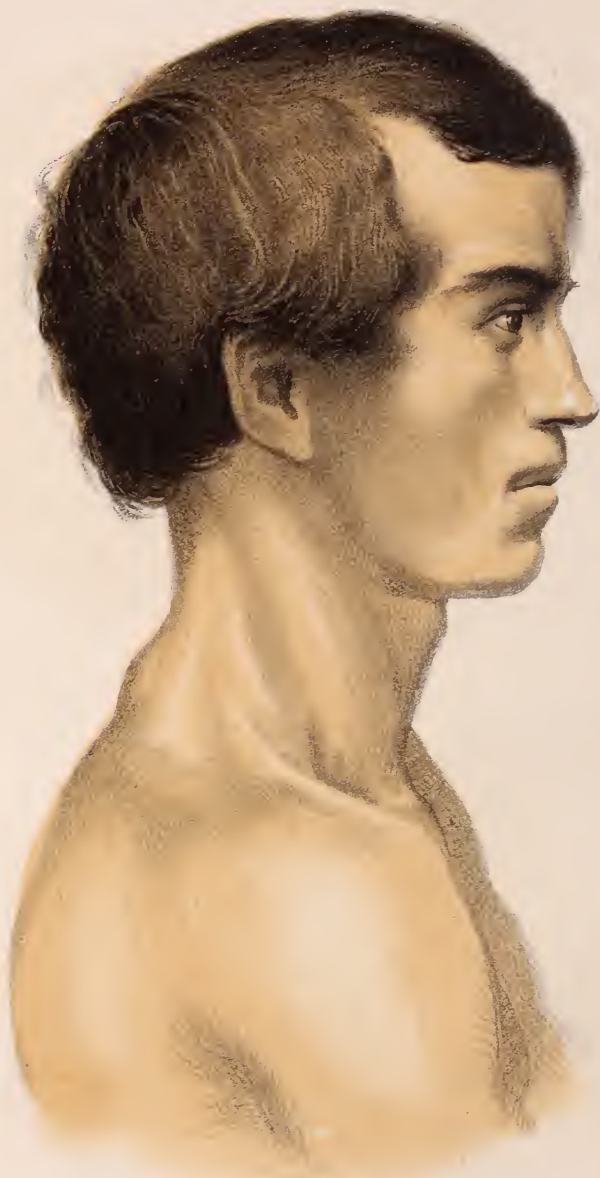
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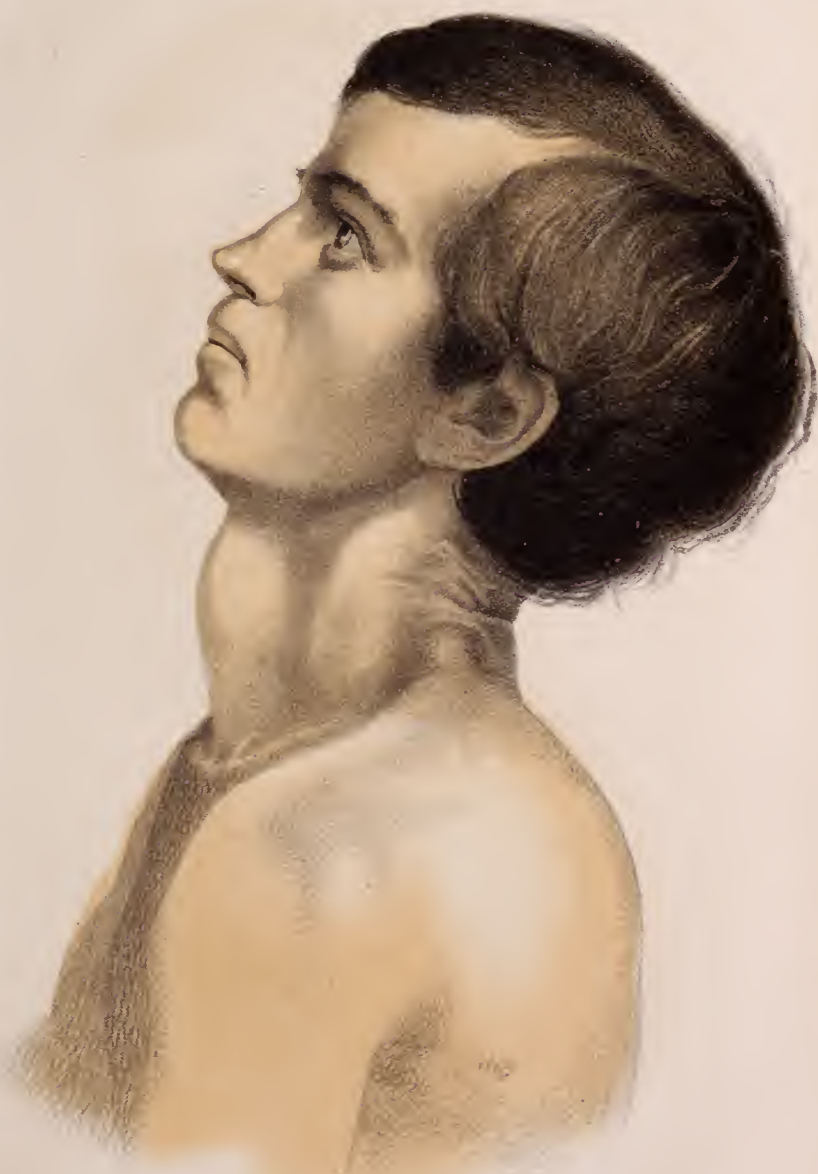
DR AYRES' CASE OF DISLOCATION



ON STONE by SNYDER, BLACK & STURN N.Y.

APPEARANCE AFTER REDUCTION.

OF THE CERVICAL VERTEBRÆ.



DAGUER ^{PT} BY WILLIAMSON

APPEARANCE BEFORE REDUCTION.



THE NEW-YORK JOURNAL OF MEDICINE

FOR JANUARY, 1857.

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PART FIRST.

ORIGINAL COMMUNICATIONS.

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ART. I.—*Contributions to Practical Surgery.* By DANIEL AYRES, M.D., LL.D., Brooklyn, N. Y. [With Illustrations.]

*Case 1.—Complete Dislocation of the Cervical Vertebrae—Reduction on the tenth day—Recovery.*—E. K., the subject of this accident, was a laboring man, thirty years of age, tall and muscular, but not fat, with a neck longer than the average among men of equal height. On the evening of the 2nd of October he became intoxicated, was brought home insensible, and did not recover from the combined effects of the shock and his libations until the following morning, when he was supposed by his wife to be laboring under cold and a stiff neck. She made some domestic applications to the affected part, and administered a dose of cathartic medicine. When it was thought sufficient time had elapsed without obtaining relief, he was seen by Dr. Potter, of this city, and afterwards by Dr. Cullen, both of whom recognized a condition which was not only very unusual, but one which they had never before observed. I was then requested to examine the case, which I did on the ninth day after the accident. With some assistance and great personal effort, he was able to get out of bed, moving very slowly and cautiously. Desiring to expectorate, he was obliged to get down on his hands and knees, which he accomplished with the same deliberation. When seated in a chair, the head was thrown back and permanently fixed; the face turned upwards with an anxious expression. The

anterior portion of the neck, bulging forwards, was strongly convex, rendering the larynx very prominent. The integuments of this region were exceedingly tense and intolerant of pressure. The posterior portion of the neck exhibited a sharp, sudden angle at the junction of the fifth and sixth cervical vertebræ, around which the integuments laid in folds. It was difficult to reach the bottom of this angle even with strong pressure of the fingers, and of course the regular line formed by the projecting spinous processes was abruptly lost. He complained of intense and constant pain at this point, which was neither relieved nor aggravated by pressure. With difficulty he swallowed small quantities of liquid, pausing after each effort, and could not be induced to take solid food, since the first attempt to do so after the accident was followed by violent paroxysms of coughing and choking. His breathing was obstructed and somewhat labored, being unable fully to clear the bronchia of their secretion. This, however, seemed rather an effect of the tense condition of the soft parts of the neck, than the result of pressure upon the spinal cord, since he presented no evidence of paralysis, either of motion or sensation, in parts below the neck. The sterno-cleido-mastoid muscles of both sides were felt quite soft and relaxed.

But one conclusion could be formed upon this state of facts, to wit: that the oblique processes of both sides were completely dislocated. The marked rigidity of the head seemed to preclude the probability of fracture through the vertebral bodies, and although the cartilage might be separated anteriorly, yet, the body not pressing backwards sufficiently to produce paralysis of the cord, it was hoped that the posterior vertebral ligament remained uninjured; it was, therefore, determined to make an effort at reduction on the following day. In addition to those originally connected with the case, I am under obligations to Drs. Ingraham, Turner, Palmedo, G. D. Ayres, and a number of other medical gentlemen who were present by invitation, all of whom confirmed the diagnosis, and rendered efficient services:—

The patient was placed upon a strong table in a recumbent position, with a pillow resting under the shoulders, the head being supported by the hand during the administration of chloroform, of which an ounce was given before anæsthesia ensued. Counter extension being made by two folded sheets placed obliquely across the shoulders and properly held, the head was grasped by one hand placed under the



chin, the other over the occiput, and by steadily and firmly drawing the head directly backwards, and then upwards, an attempt was made at reduction, but failed for want of sufficient power. Dr. Ingraham was then requested to place his hands immediately over my own in the same position as before, and steady traction was again made in the same direction. Our united strength was required in drawing the head backwards and upwards, to dislodge the superior oblique processes from their abnormal position. When this was felt to be yielding by Dr. Cullen, (who kept one hand constantly at the seat of dislocation,) Dr. Potter was directed to place his hands under our own, still in position, and assist in bringing the head forward; at the same time the chest was depressed towards the table. The bones were distinctly felt to slip into their places; the line of the spine was instantly restored, the head and neck assuming their natural position and aspect. As soon as the patient became conscious, he expressed himself ignorant of what had taken place, but free from pain, and, in his own language, "all right." A bandage was arranged to support the head and keep it bent forward. He had an anodyne for two nights following, after which no further treatment was necessary, and at the end of one week he had complete control over the movements of the head and neck. Beyond the debility and emaciation immediately dependent upon protracted fasting and loss of rest, he has experienced no uneasiness since the operation. His appetite is now good, and all the functions perform their duty normally. In a subsequent inquiry, to determine if possible the cause of the accident, he states that he distinctly recollects going into a store in Atlantic Street, near the ferry, and there having angry words with an acquaintance; that he left the store and was proceeding up the street, (which is here a rather steep ascent,) when he was violently struck from behind, over the lower portion of the neck. He likewise remembers falling forward and striking against some object, but does not know what it was, nor what took place until the following morning.

*Remarks.*—All the vital functions, or those necessary to the support of life, are so immediately dependent upon the integrity of the spinal cord and its investing bony case, that any important injury to either of them commands special attention. Without entering upon the various diseases and injuries to which the spinal column may be subjected, it may be remarked that, in all of them, pressure sufficient to

compress the cord, and thus cut off the line of communication with parts below, is the great result to be dreaded. The point at which pressure may occur is of vast moment, this being dangerous in proportion as it approximates the base of the skull. The rapidity with which compression is produced, also modifies the result. Like all other organs, the spinal cord exhibits the power of accommodating itself to great encroachments, if they are only made gradually: thus, one or more of the bodies of the vertebræ are slowly removed by caries or absorption, and the spinal column, with its contents, bent at an angle, and yet the parts below preserve their wonted integrity. Similar results often follow the slow effusions of inflammatory action, and by subsequent absorption complete paralysis may thus be removed. But such happy consequences are seldom met with when the disease is seated above the lower cervical vertebræ, because above this point the spinal cord gives off nerves which are absolutely essential to the maintenance of vital organs, and their temporary suspension is incompatible with life. These observations are especially applicable to fractures and dislocations of the vertebræ, for, whilst they are notoriously fatal, still partial or complete recoveries have followed very severe injuries when confined below the limits designated.

It was formerly maintained by Sir Astley Cooper, and held by many eminent surgeons, that dislocations of the vertebræ could not take place without the simultaneous occurrence of fracture. These observations are sustained by general experience, in this respect, that where sufficient force is applied to cause the former, it will likewise, in the majority of instances, produce the latter. The exceptions to this rule, where the dislocation is complete, are very few in number; and in most of them death has either been immediate, or soon followed the accident.

*Partial dislocation* or displacement of the oblique process of one side, giving to the head a permanently twisted position towards one or the other shoulder, although rare, has been repeatedly recognized and reduced by European and American surgeons with various results. Such was the "fortunate case" of Dessault, quoted by Samuel Cooper; that of Guerin, of Paris, mentioned by South; and one by Druitt, which died in the attempt at reduction. Dupuytren, (*Clinical Lectures*,) after speaking of luxation of the atlas on the axis, as generally immediately fatal, and beyond all

the resources of art, remarks, "The luxations of the other cervical vertebræ are generally confined to one of the articular processes, in which the head is carried to one side. The reduction of these luxations is very dangerous, and we have often known an individual perish from the compression or elongation of the spinal marrow which always attends these attempts. Petit Radel saw the case of a child who died during the manœuvres required by this reduction. Hence it is generally recommended to leave the case to itself." In the *Dictionnaire de Chirurgie* we find similar advice from Richerand, Boyer, and (mangre his success,) from Dessault also. These authorities, however, were strongly opposed by Seifert, in *Rust's Magazine*, Vol. XXXIV., and notwithstanding the unfortunate results which have occasionally attended efforts to correct this deformity, we look upon his conclusions as correct, and his directions worthy of imitation. Seifert directs that the patient should be placed sitting on the ground with the shoulders firmly held by an assistant. The surgeon then grasps the head with one hand beneath the chin, and the other beneath the occiput, making extension, first in the direction of the dislocation, then in the longitudinal axis of the neck, and when this seems to have been sufficiently made, he twists the head strongly towards the dislocated side. My friend, Dr. James R. Wood, of New York, safely and completely reduced a partial luxation of this description in a child, by employing similar manipulations. After dislocation of the odontoid process, this is the form of accident to which most authors refer in speaking of luxations in the cervical region.

We would not, knowingly, do injustice to others, nor is it an easy task to exhaust the records of surgical literature; but after extended inquiry, both personal and through friends, we have been able to discover but one case definitely described as a complete dislocation successfully reduced. This is contained in *Chelins' Surgery*, by South, Vol. II., and prefaced by the following remark:—"Hitherto, this dislocation has been only known on one side, as a consequence of external violence, or strong twisting of the muscles." He then proceeds to describe the case of Walther, as detailed in his *Journal of Surgery*, Vol. III. Pt. I., page 197, which we shall refer to again, as it was from this case alone that we received confirmation of our diagnosis, and ventured to attempt the reduction. With this exception, the manner in which the subject is considered by standard authors on practical surgery, is



indicative of great doubt as to its possible occurrence without destroying life; and, with reference to its treatment, the most general allusion only is made. Thus, Professor Miller says, "Luxations of the spine, without fracture of the processes, is a very rare injury, yet has occurred occasionally in the cervical region, ordinarily between the fifth and sixth vertebræ. It has happened by muscular power alone; a maniac, for example, having so caused death by, as it were, forcibly throwing the head from him during restraint in a paroxysm of excitement. More frequently, it is the result of violence applied from without. If life or the hope of life remain, replacement is to be effected by careful extension and coaptation."

Professor Fergusson observes, "Dislocations in this region are few, and of rare occurrence. The cervical vertebræ are occasionally displaced, either as the result of accident or disease. When the former happens, it is customary to suppose that the spinal marrow is so affected that immediate death is the result, especially if the injury is above the origin of the phrenic nerve. I have not myself seen any case of this kind, but I believe there are few in the profession who doubt the truth of the current doctrine."

Professor Samuel Cooper treats the subject more minutely, and states that, "In the upper part of the vertebral column there may be dislocation of the vertebræ, unaccompanied with fracture, because the articular surfaces of the bodies are less extensive, and the spinous and articular processes less oblique. At St. Bartholomew's Hospital there is a preparation in which there is a portion of the intervertebral substance lacerated between the fifth and the sixth cervical vertebræ accompanied with dislocation of the articular processes. By the favor of a gentleman who was attending my lectures, I was once enabled to show the surgical class of University College a specimen of complete dislocation of the middle of the cervical vertebræ without fracture. The person from whom it was taken was killed instantaneously by coming in contact with the top of a gateway as he was sitting upon an omnibus which was going at great speed." He also adds, "If we are to believe the statement of Dessault and others, dislocations of the articular processes of certain portions of the spine have been occasionally reduced." This sentence is rendered more definite by a subsequent paragraph, viz., "As dislocations of the atlas from the second vertebræ may be set down as inevitably fatal, it is unnecessary to say

anything about their treatment. We do hear, it is true, of dislocations of the head being rectified, but these are not the cases under consideration, but merely examples of displacement of *one of the articular processes of the cervical vertebræ*," etc.

Mr. Liston observes, "True dislocation of the spine from the rupture of ligaments and fibro-cartilage is a very rare accident; few cases of it are on record, and in them the injury was in the cervical vertebræ. I have only met with two instances." One of these is stated to have been fatal, and a cut exhibiting the injury given. Nothing is said of the other case, but had it survived, it is probable that Mr. Liston would have noticed the fact. He recognizes "the occasional luxation" above mentioned, but gives neither cases nor treatment.

Dr. Norris, of Philadelphia, in the *American Journal of Medical Science*, Vol. I., New Series, 1841, carefully describes a complete luxation of the fifth cervical vertebræ forward upon the sixth without fracture, resulting from a fall upon the head. In this case, the head bent forward on the chest unless supported; there was paralysis, and death occurred on the third day.

We might multiply authorities to the same purport, many however, are exceedingly vague, and some evidently writing without observation, actually mislead the diagnosis. Thus it is stated that, if the dislocation occur in the neck, there will necessarily be paralysis to a greater or less extent of the parts below.

The case of Walther, previously alluded to, accords perfectly in all its symptoms with that which we have described; yet in neither instance was there paralysis, unless the impediment to respiration and deglutition may be attributed to partial pressure upon the cord. A few anatomical facts may assist our appreciation of this accident. In the cervical vertebræ the anterior portion of the fibro-cartilages is thicker than the posterior, and its flexibility permits a certain amount of extension without rupture. The posterior vertebral ligaments which connect the bodies posteriorly, and separate them from the anterior surface of the spinal cord, are broad and very strong in this region, so that they are capable of protecting that delicate organ even though the fibro-cartilage should separate at its anterior portion from the corresponding vertebral body. It should likewise be remembered, that the cord occupies only two-thirds of the spinal canal, so that there is no difficulty in comprehending that, if the violence

applied is not too great, and other circumstances are favorable, a complete dislocation may take place without the induction of sufficient pressure to produce dangerous paralysis, provided that this is not continued for too great a period. The value of Walther's case to us prompted the effort to make this also available to the profession; and our design has been truthfully assisted by the artist whose anatomical knowledge was essential to success. In discussing the treatment, it must not be forgotten that this was not a question of deformity alone, for death by starvation was inevitable, even had he escaped the consecutive damage which would probably have ensued upon the spinal cord. The attempt was therefore justifiable, whatever might have been the result. Again, as to the degree of force which should be used, I know of no rule but to employ sufficient to produce the effect; and as we had no adequate conception, *a priori*, of the amount that would be requisite to insure reduction in this case, every precaution was taken that it should be gradual, steady, in the right direction, and only limited by the effect.

*Case 2.—Gun-shot Wound of the Shoulder—Two and a half inches of the Clavicle Removed—Reproduction and complete Recovery.*—The wonderful effects of the mind upon the results of injuries and operations, frequently forces itself upon the notice of surgeons. A buoyant, hopeful, cheerful, courageous disposition often seems to foreshadow and institute success; whilst a foreboding, desponding, gloomy, and timorous state of mind, will often blast the most favorable conditions, and thwart the best efforts of art. Nor is this to be supposed a transposition of cause for effect. The instances in which both sudden and gradual death have been produced through the direct agency of mental action are too numerous and well-attested to admit of doubt; and it is far from illogical to infer the reverse to be true. In fact, our daily practice of giving cheerful and hopeful encouragement recognizes the value of this therapeutic agency. In the following case, this favorable condition of mind formed an important controlling element.

A. K., a short, stout man, of naturally excellent constitution, hardened by activity of life, and remarkable simplicity of habits, was sixty-two years of age at the time of this accident, and yet exhibited all the vivacity and endurance of youth. Whilst engaged at work, some two miles from the city, he was met by an acquaintance who was out shooting, and they became enthusiastic in a disputation on theo-



logical subjects, for which the old man had a remarkable predilection, and was always prepared. Proving himself too powerful for the young man, and withal becoming rather personal in his discourse, the latter pointed his gun at his antagonist, by way of intimidation. This was heavily loaded with No. 6 shot, and, being out of repair, suddenly exploded. The unfortunate man was standing in an oblique position, within half a yard of the muzzle. The whole charge, including the wadding, entered his body near the sternal end of the right clavicle, forming a large, ragged wound, extending to within half an inch of the acromion process, and shattering the bone into several large and numerous small fragments. The muscles and fasciæ attached to this bone were so torn up, that the subclavian vein and brachial plexus were visible, and the subclavian artery felt pulsating at the bottom of the wound. The charge passed towards the right shoulder; after tearing both pectoral muscles, perforating the coraco-brachialis and deltoid, it emerged from the lateral upper third of the arm, forming there a ragged wound an inch in diameter. He lost a large quantity of blood on the ground and during his removal to his home—sufficient to induce syncope; and he had taken several ounces of brandy. I saw him at one o'clock, (Sept. 23,) two hours after the accident; he had rallied, and spoke with great spirit and courage; pulse at the right wrist could be felt, although feebly. On carefully removing the dressings which had been hastily applied, and clearing away the coagula, two arteries at the root of the neck bled quite freely, and were ligatured. After removing as much of the shattered bone as could be done with safety, the lips of the wound were approximated with adhesive straps, and covered with lint retained by moderate pressure. The right arm being supported in the bent position, and firmly confined to the side, the patient was placed in bed, with the head elevated. Emphysematous crepitation was now perceptible over the whole right shoulder, and this was so considerable, that it was supposed the pleura had been punctured by one or more shot, but if so, the opening must have quickly closed, for in a few days this emphysema entirely subsided.

He was ordered small lumps of ice to allay thirst and nausea which was present, and perfect quietude enjoined. Complete reaction was established in the evening; pulse 80; free venous oozing from the wound, to suppress which, additional lint and pressure were applied.

September 24.—Hæmorrhage ceased entirely; pulse 100; skin soft; slept a little towards morning; has some pain in the wound, and an erythematous blush is perceptible around it. Ord.—majend. sol. morph., 15 drops, and gruel for diet.

September 25.—Has passed an excellent night, and feels remarkably well. Dressings firm and undisturbed; pulse 80; his bowels were moved with a dose of magnesia, and he progressed favorably, until

September 29.—Complained of severe pain in the right hypochondrium, which was mitigated after two natural alvine discharges, but returned with increased severity in the evening. He was directed to take one ounce of castor oil, with a carminative.

September 30.—Oil operated, but has afforded only partial relief; the abdomen is tympanitic; tongue furred; urine turbid; skin hot; pulse 100; the countenance flushed and anxious. The dressings over the clavicle are bathed in pus; slough begins to separate at its edges, and covers the whole tract of the clavicular wound. A large cellular slough is being thrown off from the arm, to which warm water dressing is applied, covered with oil silk. Ordered to take gr. x. hydrarg. sub. mur., to be followed with saline mixture. It was apprehended, at this stage of the case, that serious, if not fatal, hæmorrhage might occur at any moment. He was, therefore, most critically watched, and ample means prepared to apply immediate pressure.

October 1.—The cathartic produced several copious and black discharges, with great relief to all his constitutional symptoms, and his general condition is vastly better.

October 10.—Patient continues to do well; slough came away from the arm to-day, with a portion of wadding and a large quantity of shot, followed by a copious, purulent discharge, of laudable character. Allowed beef and chicken broths, but thick oat-meal gruel is his staple diet by preference.

October 15.—Slough from main wound removed with dressings, disclosing the whole surface covered with granulations, which are observed to rise and fall synchronously with the vessels below. The sternal end of the clavicle, dry and black, will probably necrose; distance between the fragments, two inches by measurement. The wound was gently drawn together by adhesive straps, diminishing the open gap to one inch and three-quarters; this interval, protected by lint, spread with Turner's cerate, and gentle pressure



over all. This is more readily accomplished and less frequently disturbed since the slough has separated from the wound on the arm ; the sub-cutaneous channel thus formed acting as a drain for the upper and more important wound.

October 25.—Patient has progressed favorably, and wounds are granulating slowly, but suppuration is very profuse, and with great difficulty his clothing and bedding are kept in a decent condition. This annoyance was principally felt in the constant change of dressings necessary to support the arm and shoulder. This consisted of a well-padded ring passed over the opposite shoulder, to which slings and bandages were adjusted ; these, however, were finally discontinued, and sole reliance made upon position and support by properly arranged cushions. The patient continues in excellent spirits, although considerably reduced—his appetite is fair, and he is liberally supplied with nourishment. Is taking quinine and from one to two pints of ale per day.

November 15.—The necrosed portion of clavicle separated to-day ; the wound is gradually closing, and discharge diminishing. From this period onward my notes exhibit progressive improvement. He was allowed to sit up towards the latter part of November, but the wounds about the shoulder were not healed until January. Between that period and the following April, a number of abscesses formed about the upper portion of the chest, discharging shot ; he had collected over a hundred evacuated in this manner.

The fragments of clavicle removed and preserved, when carefully adjusted, confirms the statement, that two and a-half inches, or more than one-third, of this bone was destroyed ; and yet, at the end of one year from the time of accident, he exhibits a shoulder perfectly symmetrical with its fellow, without drooping or falling forward. The cicatrices are hard and firmly consolidated with the parts below. He is gradually regaining the use of his arm, although its field of motion is contracted by the imperfect action of some of the injured muscles, particularly the deltoid.

*Remarks.*—In reviewing the facts of this case, it is hardly necessary to add, that the advanced age of the subject, the extent of injury, its close contiguity to parts of vital importance, the reproduction of so considerable an amount of bone, the long sustained exhaustive discharges, and final complete recovery, form a combination of circumstances rarely to be expected, and still less frequently seen.

*Case 3.—Varicose Tumor of the Stomach, causing Fatal Hæmorrhage.*—Hæmorrhage from the stomach is an occasional attendant upon uterine disorders, and of very frequent occurrence in connection with organic diseases of the liver and chilo-poietic viscera. The investigations of pathologists upon this point have led them to conclude, that it takes place as a transudation through the tissues of the minute vessels, without actual lesion or rupture of their coats. This view coincides with the facts and symptoms as they usually take place, and is, undoubtedly, correct as a general rule. But there are exceptions to it, and the following case not only illustrates this, but likewise the occasional difficulty of distinguishing aneurism of this region.

J. M., 30 years of age; native of Germany; married; of active temperament; never intemperate, but accustomed to the moderate use of malt liquors. He had never resided in a malarious district, nor suffered from fever; was complaining more or less for four years and under the care of Dr. Palmedo, but always able to attend to business, with rare intervals of a few days. His usual symptoms were those of dyspepsia, with constant oppression at the epigastrium, often amounting to intense pain. Bowels habitually torpid, and, occasionally, obstinately constipated. The abdomen was frequently distended with flatus, and always prominent at its superior portion. A deep-seated tumor early began to be perceptible below the left inferior ribs, and gradually increased until it filled the left hypochondrium. It emitted a dull sound on percussion—and always pulsated strongly. He had an attack of ascites, with general anasarca, a year before his death, which yielded to cathartics and diuretics without returning. Emaciation very trifling until within the last four months of his life, but his general appearance was sallow and unhealthy. Two days before death, he commenced vomiting blood in large quantities and slightly coagulated; similar discharges took place by the bowels. Although temporarily restrained by ice, acids, and astringents, with opium, he suddenly expired after vomiting a large wash-basin full of coagula. The patient was supposed to be laboring under aneurism of the abdominal aorta, and the mode of termination seemed to confirm this diagnosis; its enormous size and encroachment on neighboring organs would rationally account for their disturbance.

*Post-mortem appearances.*—Strong cadaveric rigidity; surface pale; very little sub-cutaneous fat; intestines contained

coagula ; liver small, firm, and far advanced in cirrhosis ; spleen occupies the whole epigastric and left hypochondriac region ; ovoid in shape ; by measurement, eleven inches long, ten inches broad, and five inches thick ; surface of grayish red color, shriveled and corrugated ; substance pul-taceous and free from fibrinous deposits ; splenic and gastric veins very much enlarged and tortuous. The stomach, filled with coagula, was removed for special examination. This organ was opened carefully along its lesser curvature and supported upon a frame. The principal gastric vein, measuring half an inch in diameter, was connected with a short tube, into which water was allowed to descend by its own weight. After running a tortuous course for two inches, it opened into a cavity as large as an English walnut, from which smaller veins diverged in various directions over the whole organ. The cavity thus distended formed a tumor presenting upon the mucous surface, and about its centre a ragged opening, one line in extent, was made visible by the stream of water pouring from it, thus indicating the source of hæmorrhage. The tissues about this orifice were so tender, that with great difficulty it could be pinched up and ligated sufficiently firm to retain the permanent injection of plaster of Paris. In the vicinity of these veins, all the tissues of the stomach appear to have degenerated, and the cells loaded with fatty deposit.

*Case 4.—Imperforate Anus—Descending Colon terminating in the Bladder—Operation through the Perineum—Subsequently AMUSSAT'S Operation for Artificial Anus.*—Malformation at the lower portion of the bowels are found in various degrees, from the simple film of cuticle stretched across the anal opening, up to the complete absence of any vestige of a rectum. The proceeding of the surgeon must be guided by the peculiarities of each case, and modified according to the distance of the occluded intestine from the perineum. Where this is short, simple incision and subsequent dilatation is sufficient. When this fails, or the distance is too great after reaching the intestine, it may be separated from its lateral connections, brought down to the inferior outlet, and made fast to the integuments by points of suture. In many of these cases, the operation is necessarily exploratory, and although success may not always crown our efforts to remedy a radical defect of nature, still surgery is often a valuable palliative, as well as conservative art ; and upon this ground alone, I felt myself justified in the treatment of the following case.



I was requested by Dr. Osborn, formerly of this city, to see a male child, five days old, and received the following history: The child was born at full time; of healthy parents; appeared well developed; nursed and slept well until the third day when it became restless, and cried much. On inquiry, finding that the bowels had not been moved satisfactorily, he ordered a mild laxative. It gradually became worse when vomiting set in, succeeded by hiccough and violent straining. The doctor then instituted a careful examination and found the anus closed; this oversight is chargeable to the unintentional misrepresentation of the mother, as was proved by subsequent events. Finding the natural cleft of the nates with its central *raphè*, but no indications of an opening, I commenced an exploratory incision where it should be found, and had advanced so far as to feel the promontory of the sacrum, but could detect no impulse, although the child was crying lustily and straining forcibly. The sound of air escaping led us for a moment to think that the intestine was opened; but failing to find it, after careful searching, I was about to abandon the operation, when my attention was drawn to the penis. The prepuce was inflamed and slightly swollen; uncovering the glands, a dark matter was observed issuing from the meatus, although the child had passed a large amount of clear urine just before the operation. It was concluded that the intestine either terminated in, or was connected with, the upper portion of the bladder; thus accounting for the sound of escaping air. This was confirmed by the mother, now, for the first time, exhibiting some cloths marked by fæculent stains; here, then, was the source of her mistake. A small grooved staff, introduced through the meatus and freely entering the bladder, was firmly pressed towards the perineum. I cut down upon it as far back as possible, and reaching the groove, passed the scalpel into the bladder, and brought it out at the first exploratory opening, thus throwing both wounds into one. A large quantity of fæcal matter was instantly discharged, with apparently great relief to the child, for it went to sleep shortly afterwards. The hæmorrhage was not troublesome, and ceased on introducing a piece of sponge. This was retained for four hours and then expelled with a still larger excrementitious evacuation. The operation was performed on the 20th of January, after which the child passed a tranquil night, with complete subsidence of all its previously distressing symptoms, and nursed

freely. A roll of linen, well oiled, was directed to be retained in the posterior portion of the wound.

January 25.—Patient has continued to have several natural alvine discharges daily since the operation, all of which pass by the artificial opening, whilst the greater portion of its urine is evacuated quite clear by the meatus; occasionally a portion of it passes in the other direction.

February 15.—The child's health is good, with no return of unpleasant symptoms. The perineal wound is still suppurating and apparently contracting, notwithstanding large bougies are directed to be used several times a day.

March 1.—The opening was so much contracted that it was enlarged with a bistourie, and dilatation ordered more regularly, after which the child improved again rapidly. Partly through fear of doing harm, partly through negligence, but probably, most of all from the strong tendency of all such wounds to close, I found my little patient, on the 1st of June, almost as bad as at my first visit; a probe would scarcely pass by the artificial opening; it had become languid, nursed but little, and was loosing flesh. The abdomen had become enormously distended, and covered with tortuous veins. Its evacuations were again forced through the urethra in paroxysms of agonizing suffering, and its piercing shrieks, heard by those residing in the neighborhood, excited the deepest sympathy. At the urgent solicitation of the mother, which was hardly necessary to enforce the more direct appeals of intense suffering, I determined to establish an artificial anus in the left lumbar region, which was accomplished without difficulty, adopting the method of Amussat. The immediate result was the discharge of an immense accumulation of gas and hardened feces, with speedy subsidence of the abdominal distension, and relief from pain. On the following day prolapsus of the colon took place to the extent of ten inches, which was readily replaced, and retained by compress and bandage. After the sutures were removed, and the tissues became firm, no farther difficulty was encountered. The relief from suffering and improved nutrition soon became apparent in the augmentation of flesh and strength. At this time I lost sight of my little patient, and was subsequently informed that it continued to improve until the month of August, during which the weather was very hot. Difficult dentition ensued, with its train of exhausting symptoms greatly aggravated by the loss of its mother's milk, and it perished at last through cholera infantum.

*Case 5.—Comminuted Fracture of the Humerus, complicated with injury of nerves, vessels, and muscles—Great displacement of fragments—Operation—Recovery.*—In many cases of severe injury of the extremities, “the question of amputation,” as it is termed, becomes one of great difficulty; and no problem in surgery demands broader experience, and more mature judgment, than that which proposes to carry conservatism to the extreme limits consistent with the preservation of life. With youth and a vigorous constitution, nature sometimes accomplishes results which challenge our unbounded admiration. The due appreciation and measurement of these powers, timely and judiciously assisted by the resources of art, has furnished the most beneficent achievements of modern surgery.

From among many instances illustrative of this recuperative power, and falling under my own observation, the following case may lead us not to despair under the most desperate circumstances, where the upper extremity is involved.

A fine young lad, 15 years of age, who was the only hope of an aged relative, desirous of contributing to their mutual support, obtained work at a large rope manufactory in this city. He was employed in supplying one of the machines with hemp, which required him to pass and re-pass beside a large band-wheel carrying the main belt which set the machinery in motion. Whilst thus engaged in transporting a double armful of loose hemp, he failed to observe this belt, and, coming in contact, was instantly caught up by the left arm, and carried over the wheel with sufficient force to throw his boots from his feet across the room. This obstruction threw the machinery out of gear, and he was extricated from his position as soon as the workmen could cut away the long strands of hemp which were so completely matted around his head and chest as to stop respiration. This caused some delay, and doubtless contributed, along with the contusion of the parts, to produce the severe congestion of the lungs which afterwards ensued. The whole left side of the chest appeared to be compressed and flattened; the shoulder and scapular region, in addition to contusion, exhibited several lacerated wounds, which were deep and bled freely. The left arm was found broken at its middle third, completely twisted upon its axis, and flattened to the thickness of the hand, with no pulsation nor sensation in the parts below. In this condition he was found, and attended by Drs. Otterson and G. D. Ayres.



On the following morning, I discovered, upon examination, the humerus comminuted, and the superior and inferior fragments widely separated; the former, driven through the triceps, was presenting a sharp point underneath the integuments, whilst the latter was so entangled in the muscles occupying the front of the arm, and the whole so swollen and infiltrated, that it was impossible to make out its exact position. It was deemed imprudent in his present condition to attempt further coaptation; in fact, this was out of the question without exposing the bones. The pulse was not perceptible in the wrist of the injured extremity until the following day, and then very feebly; its temperature much lower than the opposite; color dusky, with total absence of sensation and motion. The arm was, therefore, placed in a fracture box, and every attention given to the internal injuries, which for a time threatened to prove fatal. There was severe constitutional irritation, manifested by extreme restlessness and rapid pulse; intense pain in the thorax; dyspnoea; and copious bloody expectoration. These symptoms were met by large anodynes, mercurials, and aperients.

After the lapse of nine days, the chest symptoms yielded, and his general condition became much more hopeful. The circulation in the injured extremity had improved, but was still weaker than in its fellow, and no indication of returning sensation. The arm swollen and œdematous; integuments over the upper fragment inflamed and about to ulcerate. For the last twelve hours he has complained of more pain in the arm than during the whole period since the accident; it was, therefore, decided to make an exploratory operation, and then amputate, if necessary.

With this view, after being placed fully under the influence of chloroform, a liberal incision was made over the upper fragment, dividing the fibres of the triceps so as to free it completely, and permit the application of the saw. An inch of its sharp extremity being removed, the knife was again made to divide the fascia and muscles situated below it. By this proceeding, access was gained to a cavity filled with coagula and bony spiculæ; the muscular tissue was found extensively lacerated, and the natural relation of parts thereby confused. The lower fragment was finally extracted from the sheath of the biceps, through which it had been driven into the body of that muscle. The principal nerves of the arm were known to be seriously injured, if not divided; their contiguity to the brachial artery and its impaired circu-

lation rendered it probable that this also was lacerated; it was, therefore, a source of great anxiety, and complicated the manipulations necessary to bring the broken fragments into position. But, after the wound was sponged with cold water, the hæmorrhage ceased, and it was now determined to give nature a chance. The parts were coaptated; the wound closed with isinglass plaster; the arm bent at an easy angle placed in splints of strong iron wire gauze, so arranged as not to impede the circulation. Anodynes were necessary for a few days, and the case progressed to a favorable termination. It is unnecessary to detail the minutiae of the after treatment; the wound suppurated freely, and discharged several considerable portions of bone, the granulations at times becoming very exuberant; this process was greatly facilitated by the occasional application of the acid nit. hydrarg. Generous diet was early employed, and constant attention required to prevent undue pressure at any point, which, owing to nervous impairment, was quickly prone to inflame and slough.

At the end of twelve weeks, the bones were firmly consolidated, and, passive motion having been previously employed, all dressing was removed, and use of the limb encouraged. Six months after the accident, he resumed his business; and now, after the lapse of a year, he has a limb daily improving in usefulness; the sensation is still imperfect, and it requires protection from cold; he can flex the forearm and hand strongly, but the extensor muscles are yet very feeble; he can carry a heavy chair or a pail of water when it is once in his grasp.

*Conclusions.*—From the length of time during which the circulation was absent from the wrist—its slow return and marked feebleness—the continued diminished temperature; the immediate proximity of the main artery to the comminuted bone and severed nerves—the severe stretching and compression which inevitably took place at the time of injury—and, above all, being unable to detect pulsation immediately above the bend of the arm, even at this date, I am forced to conclude that the brachial artery was obliterated at the seat of injury, and the circulation carried on through the inosculating branches. If there is any condition in which gangrene of the upper extremity could be anticipated as the result of injury, it certainly was in this; at the same time, I wish to guard against any invidious application of it to the rules of surgical practise—by stating my opinion,

that the case is an extreme one, yielding unexpected results, and as such it is presented.

*Case 6.—Adipose Tumor of the Thigh, involving the Saphena Veins—Removal—Phlebitis—Recovery.*—Among the numerous forms of tumor brought under the observation of surgeons, the adipose or fatty variety is most frequently the subject of operation. These, although they may attain enormous dimensions, are generally so situated as to be easily and safely removed. It is only when they involve important parts, and encroach upon deep-seated structures, that they become subjects of special interest.

E. B. C. was about 38 years of age; stout and robust habit; accustomed to a very active life and much exercise on horseback; enjoying excellent health up to the time of operation.

Several years previous, he noticed a tumor growing upon the inside of the left thigh, at the junction of its upper and middle third. This has gradually increased until it measures ten inches in length; is ovoid in shape, and slightly flattened; the circumference of the thigh being twice that of the opposite one. It presented all the characteristics of adipose tumor; the integuments quite movable over it, but when seized firmly and elevated, it seemed intimately connected with the parts beneath. The limb was cumbersome from its increased burden, and imparted a straddling gait in walking. The veins of the foot, leg, and thigh are enormously enlarged and varicose, having long required the use of a bandage, and frequently productive of great pain after prolonged exercise.

After some preparatory treatment, the tumor was approached by a straight incision, parallel with and reaching nearly the length of the thigh, and without difficulty enucleated from its superficial and lateral connections; but, posteriorly, it was so firmly attached as to require the knife in order to bring these relations into view. This large mass being removed, was found connected by an isthmus with a second, about half its size, the capsule of which was lost in the fascia lata. Through this all the branches of the great saphena vein were found to run, emerging in a large trunk above; this was, therefore, divided and held aside while the remainder of the tumor was rapidly dissected from the muscles beneath. The hæmorrhage from the vein was so copious, that a ligature was absolutely necessary to restrain it. Several arteries, very much enlarged, had been secured



at the time of division; the wound was cleansed, its flaps brought together by one point of suture, and strips of isinglass plaster; a bandage from the toes up, supported compresses placed over the flaps, and leaving the line of incision free. Perfect rest in bed enjoined, and the limb elevated.

On the following morning, he appeared to be doing well, although his sleep had not been good, which was attributed to the excitement. At the end of forty-eight hours from the operation, he was seized with violent rigors, followed by fever and severe headache, with pain in the back and limbs; frequent pulse; furred tongue; constant nausea and thirst; the left groin tender and a little swollen, but no pain referred to the wound.

Knowing that a loaded state of the colon at the time of surgical operations, necessarily sudden in their performance, would give rise to just such symptoms, it had been anticipated by low diet and cathartics; suppurative inflammation of the veins was, therefore, to be suspected. He was ordered ten grains of Dover's powder, with an equal quantity of the sub. mur. hydrar., to be followed by a saline draught. Copious discharges of a watery character took place four hours after taking the latter medicine, but with no improvement of symptoms. Bilious vomiting ensued; the skin became sallow, and, finally, deeply jaundiced; pulse frequent and jerking; tongue dry and brown, and some delirium; urine scanty. His chief complaint is of great prostration and thirst.

Directed, iced sparkling cider, and small lumps of ice to be given *ad libitum*, and the following powder to be administered every three hours.

R. Hyd. sub. mur., gr. jī.  
Sulph. quinine, gr. v.  
Pulv. G. opii., gr. ss.    ℥.

The plasters were removed from the wound, being raised with the cuticle along their whole tract by vesications, filled with a deeply yellow serum; wound gaping at its upper portion, and discharging thin greenish serum. Ordered it to be covered with warm water dressings and oil silk.

During the three succeeding days, the patient manifested no improvement, but, in addition to the previous symptoms, were added irregular chills and profuse perspirations, followed by great restlessness and exhaustion; pulse varying from 120 to 130, and at times very feeble. The same line of treatment was pursued, with the addition of aromatic spirits of ammonia and chloric ether, occasionally.

On the seventh day from the operation, copious discharges of pus took place from the upper portion of the wound, simultaneous with an increased renal secretion, heavily loaded with a ropy sediment, and of highly offensive odor; with it the frequency of pulse began to subside, and all his alarming symptoms gradually abated. This peculiar discharge continued for several weeks, but at no time so copious as during the first twelve hours after its appearance. He was allowed strong broth, with a moderate quantity of solid food and fruit, and continued the use of tonics. The wound healed slowly but kindly—at the end of six weeks he was permitted to go into the country, and a long elastic wove stocking, extending nearly to the groin, was directed to be worn upon the limb during the day-time. Under change of air, he rapidly regained his health, and the limb has regained its normal condition.

*Remarks.*—The salient point of interest in this case is the manner in which resolution of the fearful symptoms of phlebitis took place. The same form of medication, and, indeed, every form, has so frequently proved unavailing when the symptoms of pyæmia supervene upon surgical operations, that it is justly regarded as one of the terrors of the art. It is a question, therefore, whether the present result should not be viewed rather as one of those beautiful and beneficent natural provisions, by which a vicarious office is temporarily performed by one of the great eliminating emunctories of the system. I was strongly inclined to adopt this explanation of the phenomena at the time of their occurrence, and have since received additional confirmation of this opinion, from the conclusion of a case occurring in the practise of my friend, Dr. S. S. Purple, of New York, to which he has kindly permitted me to refer. The patient was 34 years old, and had been suffering for some time with all the rational and physical indications of empyema occupying the left pleural cavity, with bulging of the intercostal spaces, and indications of pointing below the scapula. In his failing condition, paracentesis of the thorax was strongly urged by his physicians, but pertinaciously rejected, “the alternative of death being preferred.” Suddenly and unexpectedly, his urine became copious, and loaded with a thick, ropy, and highly offensive sediment, which continued for some time, followed by an improvement in his symptoms and general condition. The patient ultimately recovered, and is now well.



ART. II.—*On the General Development of the Human Frame in an Ethnological Point of View.* By J. M'ELHERAN, M.R.C.S.E.

SPEAKING in general terms, we may say that races of men are degeneracies of men; that varieties of form in man, as well as in the lower animals, are varieties of arrested development.

But arrestments in the animal kingdom do not follow a straight course. Forms are diverged as well as arrested; taking the omnivora as the central stripe, the herbivora and carnivora diverge to the right and to the left. If we assume that races were created separately, then we should say that the species developed upwards. But if we assume original unity, we should say that the varieties diverged downwards. I hold to the latter position, because we observe in the accidental arrestment, even of the highest race, divergencies sometimes to the carnivorous, sometimes to the herbivorous organism. This phenomenon, I believe, arises from the unity of variety and versatile power of the vital principal in man coöperating with material causes.

The simice stand nearest to man, but I am not aware that they present this metamorphic power and unity of variety. We can, however, perceive an approach to it in their different species. The chimpanzee being herbivorous, while the ourang has several decidedly carnivorous points of development, as seen in the teeth, the form of brain, large zygomata. etc. In lower orders we see little of this mingling of stripes.

Forms of lower animals are more fixed, and there is less evidence of a versatile vital principle; but even in them we see this immaterial power in the phenomena of intermixture. Surely, we must acknowledge that the food, the process of nutrition, and the organism, all that is palpably material, is the same in different races of sheep. There is no incompatibility so far as material elements are concerned, because they readily amalgamate. But, gradually, one type eliminates the other, evidently showing that there is a vital principle, a conservative agent at work, superior to the mere material elements.

The endless varieties of feature and form are evidently due to the antagonisms of the material and spiritual powers. We have to notice, not only *arrestments* of development, but, also, *divergencies* of development. In the simple arrestments, we see merely the varieties of forms peculiar to higher and lower beings of the same stripe and species, or of the forms

peculiar to different ages of life ; one person growing up in the infantile development, another progressing to the mature athletic, a third to the intellectual. Besides these divisions, there are endless subvarieties produced by an eccentric distribution of the vital force, as seen in the varied proportions of extremities, cranial forms, and features. The *beau ideal* is the correlative development of all the tissues and regions—abdominal and nutritive, thoracic and locomotive, cephalic and intellectual. But, in real life, the development of tissues is unequal, the fat and fluids prevailing in infancy and in the female ; muscle in the adult athlete ; nerve in the intellectual ; bone in the aged. The fat of infancy and bone of age predominate in inferior races.

In developments, we may observe that the eccentricities of form are, however, ruled by a law of compensation, an increase in one feature, viscus, or region, being generally accompanied by a diminution in another. The upward developments are not coextensive and correlative in all the tissues, viscera, and features.

Nature approaches man through the lower animals, not in a regular series, but eccentrically—now in one region or viscus, now in another ; often overleaping the mark, as it were. Thus she makes the brain of the chimpanzee superior to the dog's or sheep's ; but in diminishing the capacity and length of snout, and in drawing the eyes together, she overdoes it ; leaving scarcely a trace of nose, and the eyes too approximate.

I need not multiply examples of this eccentricity. They occur in man as well as the lower animals. Some men have the nutritive, some the muscular, some the nervous system most highly developed ; but we must take care not to confound these eccentric forms with the radical types permanent in races. In these various eccentric forms in which we observe compensations—one part or region generally losing what another gains—we see evidence that there is, in each individual, a certain quantum of vital principle, but which is variously distributed in various individuals. This law of compensation cannot be explained, I think, by any material theory.

Under a process of starvation and oppression, a race first degenerates in the mouth and digestive apparatus ; then in the nose, chest, and locomotive system ; lastly, in the brain and cranium. When the last stage of degeneracy supervenes, regeneration is slow, and in some instances apparently impos-

sible ; because the nervous centre, the citadel of life, that held out longest has yielded, not so much to the depression of the lower regions, as to the diminution of the vital principle.

This leads me to consider the second kind of degeneracy, which are radical and permanent ; types which we should rather call stereotypes. Permanent arrestments of development, or stereotypes, are to be found in all races. That is to say, the distinctive national features of each race depend upon some peculiar kind or degree of degeneracy ; these form the subjects of comparative ethnology. The highest races, then, have their peculiar features, which approximate, or degrade, or diverge, more or less, from their ideal. In them, however, arrestments are chiefly accidental and temporary—types not *stereotypes*.

Having the highest range of development, and the most numerous points for arrestment, they present the greatest varieties. You can find in any Caucasian, or Celtic race, forms not generally identical with, but analogous to, the types of all other races. In the purest Celtic race, for example, you find all forms—infantile, athletic, intellectual, herbivorous, carnivorous, and omnivorous, Negroid, Grecian, and Kalmuck.

In the degradation, or temporary arrestment of development in the Celtic races, there is only a general resemblance to the stereotypes of inferior races. Even in the lowest forms of the Celtic, there is a different *style* of finish. The features are more or less *sculpted*, whereas, in the low Gothic, they appear *moulded*, or *fused*. Throughout all races, the nutritive foundation of the system and the features of the face afford the most general resemblances ; the chief distinction is in the brain and mind. Hence, while Gothic and low Celtic faces are often similar, their crania are almost always distinctive. The chief distinction between the degenerate Celt and the Goth, or Negro, is not so much in the external form, which is dependent upon the inferior tissue, but in the character, which results from differently formed brains ; not only differently formed, but differently proportioned in respect to the length of spine, size of jaws, etc. In these particulars, the lowest Celts retain their superiority over the highest Goths and Negroes.

A Gothic or Negroid infant is, in many respects, like a Celtic fœtus, and the adults of the lowest races are analogous to the children of the highest. The low races seldom or never develop beyond the infantile or athletic stage ; but



the highest races often exhibit arrestments. The degradation of the higher is like the maturity of the lower.

I will endeavor to supply what is desired in ethnology—a scientific classification and ground of comparison. Surely, it is childish to compare skulls, like beer-pots, according to the quantity they hold, without reference to the size of face, length of spine, etc.; or, to class them according to length of cranium, brachycephalæ, and dolichocephalæ, without reference to natural history, is equally arbitrary; or, to class them according to place of birth, is still more ridiculous. Morton, Agassiz, Ritzion, Blumenbach, Owen, Camper, etc., had no intelligent principle in their methods.

We have two grounds for a scientific classification of human types:

1. In the physiological development of the individual, as regards age and sex.

2. In comparative anatomy and natural history—in the omnivorous, herbivorous, and carnivorous orders.

We may say that an individual belongs to the Celtic or omnivorous *order*, that his species is the infantile, the infanto-athletic, the athletic, the athleto-intellectual, or the intellectual, and that he belongs to the masculine or feminine *variety*. The variety according to sex is important, because the human male approaches the physique and temper of the carnivora, the female the herbivora.

The masculine warlike Celts of the Roman, Highland, or Milesian Irish types approach the Gothic form and character; while the Phœnician Irish, the Athenians, and Ancient Egyptians resemble more the feminine Hindoo and North African.

The carnivorous and herbivorous races of a lower range of development are less complicated in their classification.

We may say of a Gotho-German that he is of the carnivorous order, and of the infantile, or athleto-intellectual species, seldom or never pure intellectual. If he is *feminine* in variety, it is more owing to want of beard and muscle than to the ovality of the female form of skull.

The Gothic skull is seldom or never oval; the Hindoo, on the contrary, is generally feminine.

Races, moreover, have been formed by mother Nature in different *styles* of art. The lower, being rough moulded, the features are fused, and the heads flattened and distorted, as if they had been made of soft material, and *run* before drying was completed. The highest races, even of the infantile forms, are more symmetrical, harder, and sculpted.

The combined phenomena of *order, species, variety, and style*, constitute the **TYPE** of an individual, or race.

Each race has its peculiar type or stereotype, in accordance with the aggregate developments and temperaments.

The central *Celtic* presents all types, though the style is peculiarly its own. The Celtic races and their descendants in America show the highest standard. Radiating from them to the north, east, and south, respectively, the carnivorous masculine, the herbivorous feminine, the athletic, the infanto-athletic, the infantile, and lastly, in the outer realms in all directions, there is what may be called the bruto-infantile.

#### CRANIA.

IN my systematic work, the entire physique of the various forms, and types, and temperaments will be described at length. In regard to crania, it may suffice here to say that I divide them according to the same natural system.

1. *Embryonic*.—This is the lowest and truly brutal or *base* form of skull—large projecting face, and small pyramidal calvarium, as seen in idiots, and the very lowest of the human races in all the outskirts of the world. In the carnivora, the basilar development is *lateral*, flat face, large zygomata, wide intermastoid diameter, etc., as in the felines. The low herbivora, on the contrary, exhibits an antero-posterior basilar development, as in the sheep, ox, etc. The one is the true pyramidal, the other the true prognathous.

2. *Infantile*.—This formation is higher than the last, the brain being largely developed; yet the face presents, even when large, the flat unchiseled bones of infancy. *Angularity* of the calvarium, resulting from the prominences of the centres of ossification is the chief characteristic of this variety of skull. There is also a frequent want of symmetry and a roughness in the suture.

The Gotho-infantile is short and angular, and when the mouth is developed, the palatine arch is flat and broad, and the alveolar arch wide in proportion to the jaws and chin which is angular.

The Negro-infantile is long and angular, and the mouth in the adult is projected and large in proportion to the chin, as in the herbivora.

The Celto-infantile is the ordinary infantile form of our race, and is never so low, though it partakes of the peculiarities of the above—sometimes of one, and sometimes of the other. The lowest forms of the northern Celts may



be called Gotho-infantile, of the southern Celts—Negro-infantile.

3. The physical or athleto-intellectual is the intermediate and transitional and most indefinite. The brain and face are pretty well balanced. The mouth, nasal fossæ and orbits, and foramen magnum are not so large, in proportion to the bones that contain them, as in the infantile; the chin is large, the jaws well set. The peculiarities of the carnivora and herbivora are not so well marked and divergent as in the infantile. The Celtic hercules is the highest type of this variety.

4. The pure intellectual, or *beau idéal*, belongs to the Celtic or Celto-Germanic race of the Rhine, and to them alone. Inferior races often approach this variety in outward resemblance, but the intellect and, we may safely say, the structure of the brain is inferior.

In this variety there is the masculine intellectual development of Jupiter, Homer, and other heroes and sages, and the feminine development of Raffael, Shakespeare, and such like gentle beings.

Several methods of cranial comparison have been invented by anatomists, each good so far, but very deceitful if taken alone. In my early investigation, my measurement of crania and comparative observations were limited and imperfect, because there was no *system* for the student.

Daubenton's measurement of the *foramen magnum*, in relation to the orbits, prove that, as a general rule, the attachment of the spine to the skull recedes backwards in proportion as we descend the scale of animal formation; in other words, that the highest race has the largest projection of skull backwards beyond the spine. This is only true as regards varieties in each grand division of race. The Gothic, or carnivora, have a short, massive, broad occiput, the foramen magnum being posterior; but the herbivorous Negroes have a long projecting occiput.

Camper's facial angles demonstrate that the forehead is more receding and the teeth more projecting in men than in brutes, and that the *beau idéal* has a greater projection of forehead than common men. But this is only a very limited criterion, as it does not inform us regarding the breadth of head, position of ear, size of jaws, and projection of malar bones and zygomata.

Blumenbach's method, or "normal rule," is but a different application of the above rule to determine the projection of

the jaws beyond the line of the forehead. But this is also a very limited and unreliable method, as it tells us nothing of the general development and shape of the facial and cranial bones, and of their relative size, position of the ear, foramen magnum, etc.

The internal capacity of the skull is also a very uncertain estimate, when taken by itself. The size and projection of the mastoid process is very variable, and the cranial arch should be measured from the external *meatus auditorius*; the length of face should be taken along with the antero-posterior diameter, and the breadth of the malar bones and zygomatic arches taken along with the transverse diameters; the size of jaws in proportion to the cranium observed; the position of the foramen magnum; the breadth and depth of the palatine arch, and the nature of the teeth; the texture and chiseling, so variable in the structure and finish; the comparative *weight* of crania that could be compared, noting the number of teeth absent.

The facial angle, so important to Dr. Morton, does not give the projection of the cheek-bones their breadth in regard to the forehead—a very important point—because some of the finest crania, with small well-chiseled face, have an anterior projection of the superior alveolus, which gives a smaller angle than some brutish skulls in which the face is broad, flat, and the cheek-bones projecting beyond the forehead. The extent and depth of the temporal fossa are very variable, not corresponding with the facial angle, or internal capacity, and, consequently, isolated measurements are worthless as a standard of excellency. The anterior inferior angle of the parietal bone varies in some cases, terminating high where the forehead is broadest, and in others descending into the temporal fossa, where the diameter is narrower. Therefore, Dr. Morton's measurements are not in all cases reliable. All cranial measurements have reference to the anatomy of the brain. How much more satisfactory would it be to saw off the calvarium, and take castings of the interior, instead of filling the skulls with sand, or shot?

In making my classification of crania, according to the natural order, I draw my facts from various sources—from actual examinations and ocular surveys of living heads—from examinations, measurements, and drawings, by myself, of skulls in Europe and America—from wholesale and retail hatters' reports, and from dentists' reports in the chief cities of the Union, where there is the greatest opportunity in the

world of studying the different races on a grand scale—and, lastly, from the writings and illustrations of all the great ethnologists: that is, if we can call works great upon a subject which is only breaking the shell. Each ethnologist has made his own favorite, or original, observations and measurements to the exclusion of others. I have taken advantage of their separate labors, and have endeavored to supply a comprehensive view of the comparative physiology of races.

No measurements, however numerous and minute, can supply the place of the actual picture on the artist's eye, which detects a line of difference and the *expression*, which no figures can describe. I have, therefore, depended more upon my sight than upon my compass; and more upon correct drawings than upon correct figures.

I have been in the habit of comparing crania; first, in the general size, proportions, texture, and weight; then each bone separately. Thus I went over Dr. Morton's vast collection, at least fifty times; first, the weight, as I could judge by the hand; then I examined all the nasal bones; then the maxilla, and so on.

The measurements of half a dozen crania of any very inferior race may be taken as a criterion of the national anatomy, because, like the lower animals, they seldom rise above a certain standard, and there is a general uniformity. Not so among the higher races, where, from various causes, the true type of the races is not always reached, and where the masses are inferior to their own *beau ideal*. The higher the point attainable by a race, the greater must be the variety of forms, arrestments of development, and the more numerous, therefore, ought to be the figures, in order to produce anything like a correct statistic. What opinion then can we express of these Anglo-Saxon theorists, who are content to find, by a partial measurement, their own superiority in five or six skulls.

These considerations have deterred me from offering any tables of measurements made by myself, or quotations from others. I believe no two ethnologists have wrought on the same method, nor is there in existence any set of tables of minute cranioscopic measurements, large enough to satisfy a real statistician.

In examining human forms, features, or crania, we must discriminate between the *degree* of development and the *type* of the subject. You may see specimens of cats, poodle-dogs,



and monkeys having the same *degree* of development, but they are at the same time of different types.

So in viewing human crania, we can often find Negroes, Celts, and Goths having the same degree of development—the same *general* proportions of body and limbs, face and head—but they will exhibit, in *some particulars*, the distinctive characteristics of their types. The typical distinctions are most evident, of course, in the contrasts between the herbivora and carnivora, the Negroid and the Gothic, but in comparing either of those extremes with the omnivora, or central Celtic, the distinctions are not so well marked in all cases. One Celtic cranium may be mistaken for a Negroid, both in degree and in type. Another Celtic cranium may pass for a Saxonie, both in degree and in type. The Celtic is only truly Celtic when well developed, that is, when it has a degree of perfection and a typical form different from the Goths, on the one hand, and the thorough African Negro on the other. The student will be disappointed who expects to find an invariable formation or type in any race, whether as regards the general degree of development, or the structure and relative proportion of any given bone. Too much importance, in fact, has been attached to crania. The cartilage, muscles, and skin are as distinctive in race as the bones. The brain would be found a much more invariable and sure indication of type, if careful dissection were extensively made.

As in the general structure, every cranium has its better and worse points, one Negro has a finely arched head over the posterior lobes, but an inferior front, and low degree of face, while you may next see a Celt, or a German, with good face and forehead, but with a narrow or flat coronal region; so it is of every single point—you cannot find any single bone, having any particular and invariable shape, in any race; even in the lower animals, there is considerable variety in the relative size and mode of articulation of the bones. It would be hard to find six dogs', six cats', or six tigers' skulls exactly alike; nor is the skeleton a sure and invariable test of the excellency of the other tissues. Some men with poor heads, heavy jaws, and flat nasals, have magnificent muscular development; others, with fine cranium, and exquisite nerve fibre, present a miserable development of the nasal and aural cartilages, and of muscle. And so of the nervous system contained in the cranium itself; in some, the cerebrum is tremendously developed, not only as regards its



size, relatively to the spinal cord, and cerebro-spinal ganglia, but also in the proportion of gray matter. Every student of anatomy is aware of these common facts; they clearly indicate that measurements embracing only a few crania cannot be relied upon, especially in comparison of the higher Celtic and Germanic races, who have the greatest range and consequent variety of forms.

The osseous structure is the last matured in the animal economy. Generally speaking, the fat has nearly disappeared, and the tissues are deteriorating, before the bones are perfectly developed. Hence, infantile and young skulls afford little, if any, characteristic distinctions of race. The strong contrasts of races can only be observed in the old crania, whereas, youth is the period for comparing the softer tissues. Hence, the common practise of *lumping* together crania, without distinction, is only adopted by those who wish to make out a case.

Whether we examine the heads of the living millions, or the dead few in glass-cases, we observe various degrees of development in each race, the lowest races being the least varied. In the low degrees, there is a general similitude, and a common brotherhood among all the nations. I will first notice this similarity of development, which is a fact altogether apart from the phenomena of *types*. *Animalism* is the common stamp of all inferior skulls of all races, but the *kind* of animalism, carnivorous or herbivorous, marks the peculiarities of race.

I have now to demonstrate the most extraordinary phenomenon in human development, viz.: divergency into the herbivorous and carnivorous forms. In the inferior races, we have simple arrestments, and varieties, chiefly infantile and athletic, or feminine and masculine, but little divergency into herbivorous or carnivorous. In the inferior races, however, there is wide divergence, as well as arrestment. All men belong to the omnivorous stripe, all are capable of living upon a mixed food; the carnivorous Kalmuck may subsist on rice, or the Hindoo may learn to eat raw beefsteak; I believe, however, that the change would not benefit either; races being stereotyped, have their natural food. I call the Goth, or the Kalmuck, or the Kaffre, carnivorous, because they have an organization approximating to the carnivorous animals. I call the Hindoo, and other dark races, herbivorous, because they approximate to the herbivorous organization. The omnivorous is the medium.

In all the collections of crania that I have examined, I see three types in the natural order, herbivorous, carnivorous, and omnivorous. According to the original manner of life, I behold a system of developments which, at first sight, would appear to establish the diversity theory more powerfully than any reasoning dreamt of in modern ethnology; but in a wider and closer examination, I find that the distinct types of human developments have, indeed, analogies to the brutal, but that they are mere arrestments of development—not necessarily primordially distinct species, but degrees of the same specific anatomy. The natural order of development, as I shall expose it, may contribute to prove the unity theory, or the contrary, according to the view we take of it. This is matter of discussion in another place. At present, I have to show that Dr. Nott, and others, have but very confused ideas as to what constitutes a type of man.

I will first compare the skulls of inferior animals; then the brutal with the human; and lastly, the human with each other. In short, I will follow out the same arrangement, I have adopted in the details of comparative anatomy.

There are three radical types of skull in the three strips of animals:—the omnivorous, herbivorous, and carnivorous. This is the division marked out by nature, and all other classifications of animals or men must be imperfect and erroneous.

The distinctive characteristics are not always clearly and strongly defined, the three stripes having many points in common; but yet we shall be able to observe, at the first glance, and upon a general law, very striking peculiarities and contrasts between the herbivora and carnivora, which are carried into the human types.

If the herbivora are inferior in their anatomy to the king of the forest and his carnivorous brethren, then we should expect to find the Negro inferior to the Goth, and the Hindoo below the Kalmuck. But it is not so. Naturalists have issued a scientific error in placing the carnivora foremost.

If the human *beau ideal* of mildness and intelligent power is to be put before treacherous ferocity, and intractable pride, then the lamb should be raised above the lion.

The nearest approach to this natural classification is the arrangement of skulls into, 1—the oval; 2—the prognathous, or lengthened out and narrow, like the Negroid; 3—the pyramidal, or short, like the lowest savage type.

But it has not been observed that the oval belongs to the

Celtic and high omnivorous races; the prognathous to the purely herbivorous inferior races; and the pyramidal to the purely carnivorous races. Nor has it been observed that these three types stand respectively at the head of the three great stripes into which nature has divided animated beings, and that the Gothic anatomy is like the tiger's, and the Negroid like the baboon's. Detached assertions of this nature are to be found here and there, but no one, hitherto, has arranged the types according to their natural developments. Much less has it been shown that the Anglo-Saxon race is carnivorous, and very inferior to the Celtic, as this work will clearly demonstrate.

In some respects, the carnivora appear to exhibit a higher development than the herbivora. Beasts of prey have a shorter muzzle than the horse, sheep, ox, etc. But this superiority is only apparent, and arises from the law of expediency. The carnivorous jaws are shorter to afford greater power, but the sharp teeth, projecting malar bones, and wide zygomata, remove the carnivorous type much below the herbivora. In the herbivora, the jaws have, like the human, a *rotary motion*, and narrower, more slender; the nasal organ is more lengthened, with a greater power of *discrimination* in the senses; and the malar bones and zygomatic arches do not project, as in the carnivora.

The carnivorous skull is flat and broad, the herbivorous is more elevated and narrow. The articulation of the herbivorous jaws is more like the human than the carnivorous. The latter open and shut like a hinge, the former have a lateral grinding motion in addition.

In the carnivora, rotary motion is not requisite, and the head of the lower jaw is broad laterally, and narrow from behind forward, and is closely embraced by its cavity, so as to prevent any lateral or forward movement. In the herbivora, on the contrary, the condyle or head is broad, and the cavity shallow, to admit of rotary movements like the human. This is another anatomical point in which the gentle type surpasses the destructive.

The herbivora have the *antrum* in the superior maxilla, and possess great discriminating faculty of smell. The carnivora have no *antrum Highmorianum*. They have larger olfactory nerves than the herbivora. They have also great power, but no discrimination of smell.

In the carnivorous skull there is a remarkable breadth, and a distinct projection over the ears, where phrenology places



the organs of destruction. This is quite typical, and is totally distinct from the narrow, and more oval brain of the gentle type.

There is a remarkable uniformity in the carnivorous species, which we do not find in the herbivora; the lowest species of the latter are much inferior in many points to the carnivora; but let us compare the herbivorous poodle or shepherd's dog, with the blood-hound or bull dog; or, let us compare the lion with the ourang, and the progressive superiority of the herbivora becomes apparent.

The baboon's jaws are comparatively small and rotary; the alveolar arch is square, and approach to the circular human; the molars are tuberculated; the palate is not so flat as the tiger's; the eyes are close; the malar bones small; and the face small in proportion to the calvarium.

The lowest species and genera, have the largest jaws in proportion to the size of brain. Thus the alligator has immense jaws, the angles of the mouth extending even behind the ears and eyes. In birds, as a general rule, the lowest species have large, long beaks, in comparison with the singing birds. The short, hooked beaks of the predaceous species is formed rather in accordance with the law of *utility* that rules the lower animals, than as a mark of superiority. The parrot, which is omnivorous, inclining to the herbivorous, has the nearest approach to a mammalian structure.

The lowest species of brutes have the longest jaws in proportion to the brain. In varieties of the same species, the superior breed of horse, dog, etc., has the smallest muzzle. Want of chin, is a brutal characteristic, particularly when the jaw is wide, angular, and very massive.

The zygomatic arch of carnivora is very wide and long, and declining anteriorly in a range with the canine teeth, thus affording the greatest power for the masseter muscles. This arrangement gives that forward prominence to the cheek-bone, so peculiar in the tiger as well as in the savage. This is a very distinctive peculiarity of this type.

Some brutes have a small orbit in proportion to the size of skull, as the bear, pig, elephant, rhinoceros, etc.; others have a very large orbit, as the tiger, cat, the hare, the deer, and animals that require quick and sharp vision. But, in all cases, whether among the herbivorous or carnivorous brutes, or whether the orbit be large or small, the face is flat, and the orbit, consequently, shallow.

In general, and especially in the carnivora, the malar



bones project in front of the calvarium, so that the forehead is quite behind the face. In the higher species of animals, especially the dog and monkey, the frontal bones are more nearly on a level with the cheek-bones, thus approaching more to the human.

Let the student remember that the most brutal formation in inferior races is the *projection* of the facial bones, and the large size of the jaws. The carnivora are distinguished by the greater projection of the cheek-bones, and the enormous width of the zygomata.

Large heavy jaws, without clin, is then the most obvious and invariable characteristic of the brute. A far more important, but not so striking a peculiarity, is the want of salience, prominence, individual development in the bones and features of the face; all are locked and smoothed into each other, like a piece of plain woodwork. There is no distinct separation or indentation between the frontal and nasal bones, nor between these and the maxillæ and malar bones.

Perhaps the most remarkable formation has yet to be noticed—namely, the junction of the head to the spine. In fishes, reptiles, birds, and the lowest mammalia, the cranium projects, with the mouth and ear almost on a straight line with the vertebræ. But, in ascending the scale, we find that the cranium is brought more and more towards a right angle, until, in man, a line from the mouth to the ear cuts right across the vertebræ, so that, in man, the head is horizontal; in the baboon, it is placed at an angle of thirty-seven degrees; in the horse, etc., it is vertical. In inferior races the head is not so horizontally poised as in the highest type. In the brute, the head hangs from the end of the vertebræ, so that there is no back of head, no occiput. The human, especially the female head is balanced on the top of the spine, so that there is nearly as much weight of brain behind as in front.

The *foramen magnum*, or large opening where the spine is joined to the skull, is quite at the back of the brute's head, while in the human high type it is *under* the skull. The position of this opening, then, is very important, as, determining the height of development, we shall find that the foramen magnum, in inferior types of men, is placed far back; there is little or no projection of brain behind, the head and neck forming almost a straight line.

The lower species of brutes have great width between the

eyes. The herbivorous monkey and baboon resemble the human in the closeness of the eyes. The fœtus, at an early stage has the eyes wide apart; the lowest types of men retain this peculiarity.

The inferior types of men have these brutal characteristics. Large jaws and bones of face, in proportion to the brain and calvarium; the bones of the face are not salient, prominent, chiseled, and well-demarcated from each other and from the bones of the head; the forehead does not project, but forms a straight line with the nose, in most instances; and, in all cases, the forehead and cheeks are nearly on a level, as in the brute. This I call shallowness of the orbit, and flatness of face. In some cases, the orbit is small, and the eyes sunken; in others, the orbits are wide, and the eyes large; but, in either instance, the orbit is shallow, and the face flat, because the facial bones are large and prominent.

In examining a skull, we must note, as the most important point, the development of the facial bones, and their size relative to the cranium. We must, therefore, consider the three grand divisions of regions of the skull: 1. The facial. 2. The basilar, or base of the skull, extending across between the ears, and to the temples in front, and the *occiput* behind, this region containing the ganglia of animal life, and, with the facial bones, gives the key to the abdomen and chest, and the sensual and motor temperaments. 3. The coronal, or intellectual region, which includes the length, breadth, and height of the cerebrum, which is divided into the frontal lobe, the middle or coronal lobe, and the posterior lobe.

The *frontal lobe* rises above the *temples*, the *coronal lobe* above the *base*, and the posterior lobe above and behind the *occiput*, which is occupied by the cerebellum.

It is an error, very common, to confound the *occiput*, the seat of the *cerebellum*, and posterior basilar region, with the higher region of the posterior lobe of the *cerebrum*, at the top and back part of the head. This is a moral, intellectual region, whereas the *occiput* is sensual and animal.

In the lower mammalia, the front lobes and little of the middle lobes are visible. In the higher species, the middle lobes are developed, more or less; but little or no appearance of posterior lobes, until we arrive at the monkey tribe. In the ourang-outang, the cerebrum preponderates so much as almost to cover the cerebellum.

The most degraded carnivorous race present this brutal

type of brain, which is deficient in the breadth and height of the front lobes, and very deficient in the posterior cerebral region. But the development of the basilar region is tremendous, giving a projection in front and behind, and between the ears; the head is, therefore, flat behind, receding in front, and pyramidal at the sides; the measurement carried round above the ears and eyebrows, is much greater than the width round the forehead, higher up.

The high type of female skull, oval and with the posterior cerebral lobes extending backwards, is the most perfect type. It is finely balanced on the spine, and imparts that upward look and undulating motion, so graceful in the walk of woman. The Gothic woman, whose skull is flat posteriorly, and who have a more muscular neck than the Celtic female, carry the head stiff and the face perpendicular, instead of being turned gently upwards.

The oval formation is carried through the face, as well as the cranium. Horizontal sections made across the forehead and face, present the oval becoming more pointed as we descend. In the *beau ideal*, the whole central line of the face, from the root of the hair to the chin, projects remarkably. The temples and cheek-bones being chiseled away. Taking a profile view, we observe that the centre point of the cheek-bone is far back; the forehead, nose, and centre of the face, projects forward.

Anatomists have observed a very remarkable difference in the three types of skull, in regard to the position of the cerebellum. In the *oval*, or Celtic skull, the cerebellum is placed obliquely, giving a medium development of occiput, but still overlaid by the cerebrum. In the *prognathous*, or Negroid skull, the cerebellum is placed horizontally, and completely under the posterior lobe, which projects behind. In the *pyramidal* skull, on the contrary, the cerebellum is placed vertically, completely behind and encroaching up upon the posterior lobe, which consequently does not overlay the cerebellum, as in the other types.

This is a very remarkable distinction, because it shows that the Gothic skull is filled chiefly by the basilar ganglia, which swell out laterally and posteriorly; while, on the contrary, the basilar ganglia occupy a small space in comparison with the cerebrum in the oval Celtic skull. Therefore, the mere measurement of the internal capacity of the Celtic and Gothic crania, proves nothing in regard to comparative intellect. The occipital projection of the Negro is not on a

level with the ears, but is caused by the extension of the cerebrum—while the broad projecting occiput of the pyramidal Gothic skull, between and behind the ears, is caused by the vertical animalized position of the cerebellum. This phrenological fact accords with the respective characters of these races; the Goth being brutal, stupid, and infanticidal; while the Negro is amiable, docile, and full of the emotional and domestic affections.

What is animalism? We have seen that it is the predominance of the lower developments; the nutritive; the locomotive; the organs of sensation. In other words, the largeness of the mouth and jaws; the protrusion of the foramen magnum, or spine-junction; the protrusion of the ears and of the lower edge of the orbit; and the consequent smallness of the calvarium. Daubenton's estimate of the position of the spine-junction; Camper's facial angle; Blumenbach's normal rule, etc.; all illustrate this fact, that, in the animal skull, with low contracted crown, the passages of the head, of mouth, nose, eyes, ears, and spine, are thrown out, and the edges uppermost, or nearest the crown, drawn back. Thus, the orbits in our *beau ideal*, have the upper edge thrown forward by the protrusion of the brain; in the animal it is drawn back and back, until in the lowest they are almost horizontal; the cheek-bones being left protruding anteriorly and laterally. In the inferior skull, the passages are not only protruding and large in respect to the calvarium or brain case, but they are large in comparison with the bones themselves. The outlet of the animal pelvis is large, in proportion to the extension of the illii or haunches. In like manner, the palatine and dental arches are large in proportion to the jaws; the jaws of our *beau ideal* are relatively small to the head, and the mouth is relatively small and retracted in proportion to the jaws. In the lowest races, the nasal passages and orbits are large in proportion to the bones that surround them; the frontal and nasals particularly. In the pyramidal skull, also, as in the lower animals, the greatest breadth of head is between the ears; lastly, the spine-junction is large, protruding and posterior. Inferior skulls are like the lower animals, heavy and composed of thick unchiseled bones rudely put together; the sutures or joinings are angular, and have not that beautiful and intricate dovetailing of the higher types. Thickness and heaviness of bone is not an invariable characteristic of lower animals or of lower races; some Negroes of the gentle type, have thin, light bones.



Grossness is most common among the rude carnivora. The Kaffres, Malays, Red Men, North Germans, Fins. Such are the general characteristics of inferior crania in all races.

#### RESUMÉ.

The three radical types of skull have these distinctive peculiarities:—

The oval omnivorous, or Celtic cranium, is large in the coronal region, the anterior lobes projecting over the face, the middle lobes projecting over the auditory passage, and the posterior lobes projecting over the occiput; the face is proportionably small and prominent in the centre, the nasal bones being salient, the orbits oval, and the malar bones small and set back; the zygomatic arch and temporal fossa are also small; the whole structure is light, well elaborated, and finely chiseled. These details are of far more importance than the mere internal capacity of the cranium.

The prognathous herbivorous, or Negroid skull, is not so large in proportion to the spine. The anterior and middle lobes do not overlay the face and auditory passage; but the posterior lobes project beyond the cerebellum; the face is large and projecting: the structure is coarse and heavy, and is unelaborated and not chiseled.

The pyramidal carnivorous, or Gothic skull, is most animalized. In the great size of the face, which is also flat and unelaborated; the jaws are heavy; the teeth more inclined to the carnivorous than in the other types; the malar bones, zygomatic arches, and temporal fossæ are enormous, like the carnivorous type of lower animals; the anterior lobes do not project right over the cheek-bones; the middle lobes are narrower at the crown than at the ears; the posterior lobes are quite deficient, this place being encroached upon by the cerebellum. This last is the most invariable and peculiar characteristic of all the Gothic or carnivorous nations—red, yellow, black, or white. This is the most animalized type of skull, the cavity of the cranium being largely filled with the basilar ganglia and cerebella.

Among all the races of all the continents, we observe similarities of development or form up to a certain degree approaching the intellectual. In like manner, we may notice that the tripartite division prevails on all the continents, rising in perfection as they approach the Mediterranean, and varied on the several continents, just as the lower animals are varied.

The Goth, or A'Sassan, is a European variety of the carnivorous type; the Kaffre is an African variety of the same; the Mongol is the Asiatic; the Red Savage is the American; Feegeean is the Polynesian variety of the carnivora. All these have a common character, and resemble each other as much as the bears—white, brown, or black—or as the tigers, panthers, and jaguars resemble each other all over the world. They all have broad, short, flat heads, large jaws, wide cheek-bones, long spine, etc.

The purer forms of herbivora, as well as carnivora, are disappearing from about the Mediterranean, giving way to the omnivorous type; but we see the herbivorous type, with long narrow head, protruding mouth, small jaws, large limbs, and mild temperament, in South and West Europe, in Africa, among the Hindoos of Asia, in Central America, and the ancient race of Peru, and in Polynesia.

The omnivorous, or perfect human type, is originally circumscribed around the Mediterranean, stretching along into Hindostan; beyond this, in Asia, America, Polynesia, or Africa, we scarcely meet with the perfect type, and the races resolve themselves into the two lower types—herbivora and carnivora. These two are most strongly marked in the outer bounds of the world, but feebly near the Mediterranean, where we see less of the tiger, less of the sheep, or monkey, and more of the man.

If we review the great divisions of the earth, we do not perceive that any inferior race forms a centre of a system from which other races radiate, if we except only the Artic type. Here, indeed, is an unique type; and, descending on Europe, Asia, and America, we find an increasing diversity of humanity, as well as of flora and fauna; but, going on still to the extreme south, the human types begin to degenerate, until we come to the Fuegeans, the Bozjermans, the Alforians, essentially the same pyramidal-skulled type as the Artics.

The Artics are, therefore, not the central type. And it is absurd, moreover, to suppose that the Artics were created and nurtured where we find them. (This strongest point of Dr. Agassiz is his weakest.) Neither is any degraded race the central type. But the high perfect type of the Mediterranean, where the three continents join, is the central type, and the most varied. We may observe that this Celtic type is anatomically central, physiologically central, and also philologically central. All the outside races are more purely

carnivorous, or more purely herbivorous, in this anatomy and physiology, and the outer rind of humanity in all directions is the most purely carnivorous, and the most brutified.

This radiating declension in three forms, according to the general law of animal formations in three stripes, is the most pregnant and important fact ever demonstrated in ethnology.

Here is a central well-spring, a life knot, a tree of life, bearing human fruit, and casting its seed to multiply on the earth. That seed takes root in distant soils, and forms, under new conditions, new centres of new races, which become hereditarily permanent of their kind.

And what is most remarkable, the farther the seed is borne away, and the oftener it undergoes transplantation from the original native soil, the weaker it becomes; producing races huge and lumpish, deformed and dwarfish, with undeveloped brains, stunted or monstrous features, and savage and childish intellects. Behold the aborigines in North Europe, in the North and far East of Asia, in Africa, in America, in Australia, the most distant being the most degenerate seed—seed so inherently weak that it cannot be restored, and must perish and give way to fresh seed, from the high central race imported *direct*—without repeated transplantations from the original mother earth.

Peculiarities of race are nothing but evidence of degeneracy, permanent arrestments of development of a carnivorous or herbivorous type, according to circumstances, and they are low in proportion to their original distance from the Mediterranean. Taking the true Toltecs as an ethnological and geographical centre, we observe—though less strikingly—the same system of increasing degeneracy into North and South America. Taking the true Polynesian as another centre, we observe the same system repeated on a still lower scale. The races of the Pacific degenerating into Australia and the Indian Archipelago.

Here are three great realms of races, within these, in Europe, Asia, Africa, America, and the Pacific, we may observe lesser centres, or groups of races. This great formation, extending from Celtica, may be compared to a process of crystallization, wherein the central and first formations are most perfect and beautiful—the outer and last formed crystals being less perfect, and more amorphous. The other lower systems or groups form, as it were, secondary centres of crystallization around the first.

In this, there is not an unbroken, but only a general grada-

tion, or thinning off in this tree of life ; the outer rind is the coarsest, the outer branches the weakest, and least vital, the outer crystals are the least coherent, regular, and beautiful ; or, if you will, we may state the facts thus—the human world is composed of realms, one mediterranean, nursing the original tree, bearing the loveliest flowers, and producing the finest fruits ; each of the other realms bears a slip of the old tree, transplanted and grown into a tree, with its branches, and the great tree of each realm is weaker and coarser the farther it has been transplanted ; but, being transplanted, its new growth or type is permanent. But the old tree still grows on, and increases, and casts its branches over the earth, killing out the weaker trees—in other words, the original old race is encroaching upon all other races.

These are the facts, explain them according to unity, or diversity, as you will.

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ART. III.—*Case of Ligature of the Common Iliac Artery for Aneurism of the External Iliac.* By W. H. VAN BUREN, M.D., Prof. Anat. University of New York, Surgeon of N. Y. Hospital, St. Vincent's Hospital, etc.

Mr. J. C., the subject of the operation which I am about to describe, was first seen by me, professionally, in May, 1853. He had come to this city from Canada, for the purpose of seeking advice for a large tumor of the right groin, which was growing rapidly. On examination, I found the tumor to be an aneurism, pulsating strongly and expansively in every direction. It had been first noticed about four years before, and had been steadily increasing in size to the present time—of late, more rapidly, always presenting strong pulsations, synchronous with those of the heart. The tumor was now about the size of an ordinary child's head at birth, somewhat flattened upon its surface, occupying the fold of the groin, and extending upwards along the course of the external iliac artery, beneath Poupart's ligament, the position of which was marked by a depressed line dividing the convex surface of the tumor into two equal halves. Its bulk was diminished very considerably by pressing the external iliac artery against the brim of the pelvis, and its pulsations were entirely checked by the pressure. The patient's abdomen was very fat, and continued pressure caused so much pain that I could not satisfy myself that the contents of the



tumor were entirely fluid, but, from its rapid diminution, and also from its well-marked expansive pulsations, I concluded that it contained but a small proportion of coagulum. When the ear was applied to the tumor, a moderately distant bellows murmur was perceptible. When first recognized by the patient, four years before, the tumor was about the size of a hickory nut, and it lay over the course of the main artery, immediately below Poupart's ligament. The disease, as far as I could learn, was spontaneous in its origin. The patient could recal to mind no injury which might have caused it. He had never had syphilis, nor been subjected to the action of mercury. His heart was sound, and no aneurismal disease could be detected elsewhere. His age was forty-six; unmarried; a member of one of the learned professions, and of irregular habits, addicted to the inordinate use of tobacco and stimulants; latterly also of opium. He was obese in his person, and possessed very little moral courage, as the history of his case will prove.

I explained to the patient the nature of his disease, and recommended him to submit to a surgical operation, with as little delay as possible, as the best means of cure. He then told me that he had already received this opinion from an eminent surgeon of this city, whom he had consulted, and who was about to perform the operation just advised. On learning this, I declined taking charge of his case, and urged him to place himself again under the care of the gentleman whom he had at first consulted, and to submit to the operation. He promised to do this, and I communicated the circumstance to his surgeon. Some weeks afterwards, I was informed by him that our patient had left the city, having been unable to summon the courage required to submit to the operation.

Early in the month of September following, I was again summoned to visit Mr. C., and found him returned to the city in great distress of mind, with his aneurismal tumor fully double the size it presented on my first examination, and very anxious to be immediately subjected to the operation. His surgeon was duly informed of his determination, and everything was prepared to operate in a day or two, when he again changed his mind, and left his residence and the city suddenly, and without explanation or apology.

A third time I was sent for in urgent haste by our patient, who had taken refuge in St. Vincent's Hospital, late in the month of November. I found him, on this occasion, in a

truly deplorable condition of mind as well as of body. He was urgent to be operated upon immediately, and was full of contrition and apologies for his vacillating conduct heretofore. His aneurism had increased to a fearful size; it was still pulsating furiously; and its contents, as far as I could judge, were yet mainly fluid. Upon the most prominent part of its surface, (above Poupart's ligament, where the great bulk of the tumor now lay,) was a dark colored eschar, larger than a half dollar, and the remainder of its surface presented a dusky livid hue. The limb below was swelled to double its natural size. His pain was constant, and, at times, very severe. Of the actual size of the tumor at this time it was difficult to convey an exact idea. To compare it to the head of a child of six years of age, would certainly not exaggerate its dimensions. The large amount of fat in the abdominal walls rendered its upper limit difficult to define, and the same obstacle prevented me from compressing either the right primitive iliac artery or the aorta sufficiently to arrest its pulsations entirely.

In this desperate condition of affairs, death being liable to take place at any moment from the giving way of the eschar which had already formed upon the surface of the tumor, I resolved to attempt the ligature of the main arterial trunk supplying the tumor, if such a course should be approved by my colleagues. A consultation was accordingly requested, and the operation being considered as offering the only chance of life to the patient, it was performed at once in presence of Drs. Valentine Mott, Power, Murray, A. B. Mott, Finnell, James R. Wood, Isaacs, Geo. T. Elliot, and several students. Chloroform was administered and acted happily. The corpulence of the patient and the size of his tumor rendered the recognition of the usual landmarks a matter of more than ordinary difficulty. A curved incision was made about eight inches in length, commencing above midway between the most prominent point of the iliac crest, and the umbilicus, and terminating below over the situation, as nearly as it could be ascertained, of the external abdominal ring; the convexity of the incision looking downwards and outwards. The tendon of the external oblique muscle was then divided so as to lay open the inguinal canal and expose the spermatic cord. This was traced up to the internal abdominal ring, through which the finger was introduced behind the peritoneum, and, upon the finger, the origins of the internal oblique and transversalis were detached by the

bistoury from the outer half of Poupart's ligament. Free access and sufficient room being thus gained behind the peritoneum, this membrane was then carefully separated from the tumor upwards and inwards towards the position of the main artery. This vessel was soon brought into view lying upon the brim of the pelvis, and not far below the level of the umbilicus; it was carefully exposed for the space of three-fourths of an inch, and being recognized by the surgeons present as healthy, a strong ligature was readily passed around it and tied, with the result of at once arresting all pulsation in the tumor. Principally in consequence of the facility with which the artery was reached, and also on account of the great depth of the wound, resulting from the size and upward pressure of the tumor, and the amount of fat in the abdominal walls, the artery upon which the ligature was placed was supposed by myself, as well as by the other surgeons present, to be the external iliac near to its origin from the primitive iliac. As the peritoneum was detached from the surface of the tumor, it was pressed carefully, but forcibly, upwards and inwards, together with the mass of small intestines by the hand of an assistant, (Dr. Isaacs,) and this mode of procedure was found preferable to the employment of a broad spatula. As will be seen shortly, the ligature was actually placed upon the primitive iliac artery, just half an inch above its bifurcation into internal and external iliaes, the traction exerted by the huge aneurismal tumor having drawn the vessel slightly downwards from its normal position. The wound was accurately closed by sutures and adhesive straps, and the patient carefully placed in bed before the influence of the anæsthetic was withdrawn. The operation was on the whole well borne; the shock was slight, and reaction immediate and favorable; no vomiting followed; the limb was enveloped in woollen cloths; its temperature was for a few hours somewhat lower than the other, but afterwards it did not vary from that of the rest of the body. It did not rise above the temperature of the sound limb, as often happens after ligature of its main artery.

During forty-eight hours after the operation, the patient did exceedingly well. He took beef-tea, with a moderate amount of morphine, and stimulus, which his usual habits rendered necessary. At the close of the second day he had a chill, succeeded by increased frequency of the pulse and great restlessness; and the tumor, which had subsided to

about one-third of its original size, became exceedingly tender and painful. From this period the patient's strength began to decline, and his restlessness and frequency of pulse to increase until the close of the fourth day, when, in spite of all our efforts to avert the result, he died.

The body was examined the next day with the assistance of Drs. Isaacs and Finnell. The tumor and the parts surrounding it were found to be the seat of inflammation, which had terminated in suppuration. The tumor contained recent coagula, with some layers, slight in thickness, of older date. It involved the external iliac throughout its whole length to within an inch of its bifurcation. The wound had united throughout, except where the ligature was brought out. There was no peritonitis. Death had evidently resulted from the irritative fever which accompanied the development of suppurative inflammation in and around the aneurismal sac. The tissues around the tumor, weakened by long continued stretching and imperfect nutrition, took on inflammation readily, whilst the impaired constitution of the patient was entirely unable to resist its progress, or to undertake the reparation of so extensive an effort at disorganization.

On laying open the arteries in the vicinity of the ligature, every appearance indicated a successful effort at obliteration of the primitive iliac. A firm conical coagulum was found both above and below the ligature; the latter clot being more than half an inch in length and bifurcated—one portion being prolonged into the internal, and the other into the external iliac arteries.

*December 5, 1856.*

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ART. IV.—*Induction of Premature Labor*. By GEORGE T. ELLIOT, JR., M.D., Physician to Bellevue Hospital.

THE *New York Journal of Medicine*, for July, 1856, contains an interesting article by Dr. Næggerath, on the induction of premature labor by the injection of warm water within the cavity of the uterus. This occurred on the 2nd day of July, 1856, and is believed by Dr. N. to be the first operation of its class performed in this city.

On the 16th of December, 1853, while Resident Physician of the Lying-in Asylum, I induced premature labor with the douche, under the following circumstances:—

Mary Kipple, healthy looking, and apparently well formed, had been twice delivered with the perforator and crotch-



et. Pregnant for the third time, she was brought to Prof. Gilman for advice, and recommended to the Asylum. She was then about seven months gone, and the foetal heart distinctly audible. The antero-posterior diameter of the brim was much diminished from projection of the promontory and upper part of sacrum; pelvis otherwise normal. Drs. Cock, Beadle, Metcalfe, and T. F. Cock, physicians to the asylum, saw the patient, and they, with Dr. Gilman, concurred in urging the induction of premature labor.

I selected the method recommended by Kiwisch, from previous personal experience of its efficiency in relaxing the rigid os uteri, so often the source of troublesome delay in labor. At. 11 P.M., December 16, 1853, I injected about two gallons of tepid water, in a steady stream, well against the os uteri. The instrument used was the admirable india-rubber syringe, invented by Higginson, of Liverpool, which had been kindly sent to me by Prof. Simpson. The patient was placed on her back, with her nates projecting somewhat over the edge of the bed, and a large tub received the water as it escaped from the vagina. The instrument that I used enabled me to direct the nozzle of the syringe with one hand, and to regulate its action with the other.

December 17, 9 A.M.—The vagina and the os uteri had commenced to relax, though the patient had enjoyed a quiet night's rest, and felt no symptom of approaching labor.

2 P.M.—Repeated the injection, which neither annoyed the patient in anticipation or performance. The os was now softened and the vagina much relaxed, while slight wandering pains around the back and abdomen denoted incipient uterine contraction.

December 18, 2 A.M.—Entering the ward to repeat the injection, I found the patient in bed, unconscious of any symptom of approaching labor; though the os was now dilating very satisfactorily, and the membranes commencing to protrude in a somewhat cylindrical form. At 5 A.M., they ruptured, when the funis prolapsed to the vulva, and the right foot entered the vagina.

The funis was pulsating vigorously; and the arguments used by Dr. Simpson to illustrate the advantages of version in deformities of the pelvic brim, satisfied my mind that the pelvic presentation would rather increase the chances of safety for the child, were it not for the unfortunate complication present.

But the child was larger than I anticipated, (weighing

five pounds two ounces,) and before my best directed efforts could draw the shoulders and head through the contracted brim, all pulsations in the funis had ceased, and no endeavors of mine could resuscitate the boy.

The placenta passed without difficulty, and so little did she suffer from the labor, that Mrs. Kipple left the house surreptitiously a few days after, rather than await the time when she might do so without incurring risk.

In my judgment, the unexpected size of the infant, and the untoward complication of the prolapsed funis alone prevented the birth of a living child; while it is evident that no labor could advance more insidiously, or entail less suffering.

It is interesting to note the closeness with which the phenomena presented simulate those of the most fortunate labor. First, relaxation of the soft parts, with increased secretion; the os then softens, relaxes, and dilates, when the pouch of membranes passes intact into the vagina. The first stage of labor may be said to be accomplished with the least possible inconvenience, and the patient saved in great measure from its attendant sufferings, which are probably productive of more annoyance and anxiety than the severer expulsive efforts which promise speedy relief to the burden.

Reference to reported cases will show that, in many, the commencement of labor was detected by the physician before it was perceptible to the patient, a fact well illustrated in the one reported above; and it is an established fact that the child's risk diminishes in direct ratio to the simplicity of the labor.

At the present day, when the propriety of the operation has been placed beyond a cavil, in those cases where a previous labor has demonstrated a degree of deformity forbidding the passage of an unmutilated child, there remains but the choice of means.

In the *New York Medical Times* for July, 1853, will be found the report of a case where I used the douche to relax and undilatable os, with signal benefit; and, indeed, from the autumn of 1852 to the present time, I have had many opportunities, in hospitals and in private practice, of testing the value of this agent in relaxing a rigid os uteri in the first stage of labor.

The form of the instrument is a question of convenience to the operator. One like Matteson's, or that of Thier's, which can be worked with one hand, presents obvious advantages, and a small nozzle readily moved in the vagina is desirable.

It is essential to the success of the operation that the stream should be directed against the orifice of the os, and that the advantage gained should be followed up by deeper insertions of the nozzle; this practice should not differ in inducing labor, or in relaxing the os.

This was well illustrated in a case of labor where I suggested the use of this method; and the second injection having produced no change, I requested that it might be again tried, when I learned, accidentally, that the management had been confided to the nurse, who barely introduced the nozzle within the vagina. Success followed a proper application.

In the monograph of Dr. Silbert, on this subject, it is stated that Dubois induced premature labor successfully in a woman with three injections. Having to repeat the operation in the same woman, again pregnant, it was repeated eight times without effect, a delay attributable to an inclination forwards of the os, by which the force of the water was spent on the posterior lip. This being recognized, the nozzle of the instrument was so directed as to throw the stream against the orifice of the os, when labor instantly set in. Had the fingers of one hand held the nozzle in position from the first, this accident could not have occurred.

In no case, that I am aware of, where premature labor has been induced according to the method employed with Mrs. K., has it been attended by the result signalized by Dr. Næggerath in his case, where the water was injected through a catheter introduced between the membranes and the uterine wall to the depth of four inches. After the second injection, "Mrs. M. experienced a very distressing pain in her abdomen, much more so than she did at the former injections. It made such an impression upon her system, that she fell into an almost unconscious state; the pulse sunk suddenly, so as to be scarcely perceptible; her face instantly became purple, and her breathing very much embarrassed. Half an hour later, when she recovered from these symptoms, she was seized with a violent chill, which lasted nearly two hours; this was followed by a feverish condition—general heat, and a pulse of one hundred and thirty in a minute. This alarming state gradually subsided, and a renewed succession of strong uterine contractions commenced."

The injection of *carbonic acid gas* in the vagina, on the principle advocated by Brown-Séquard, that it excites unstripped muscular fibre to contraction, has been added to our



resources of late. The first successful application of the principle is due to Scanzoni. This gentleman has abandoned the practice, which he introduced, of exciting the expulsion of the ovum, through sympathy with irritation of the mam-mæ.—(*Vide Lond. Lancet*, Nov. 1853, p. 415.) An interesting illustration of this sympathy, by the way, can be found in another part of this number of the Journal.

The following is an abstract of Scanzoni's recent case, condensed from an English journal :—

A very small primipara, aged 26, with deformed pelvis, in the thirty-second to the thirty-fourth week of gestation, was the subject. Outer os uteri fast closed; head floating; foetal pulse faintly heard.

Two table-spoonfuls of bi-carbonate of soda, in  $\text{ʒxij}$  of water, were mixed in a quart bottle, and the acid was supplied by a little vinegar. From this bottle a tube passed through a glass speculum into the vagina, and the tube, being surrounded with a cork, retained the gas in the vagina.

First day.—Application for twenty minutes; no change. Second day.—Morning, for twenty-five minutes; evening, thirty minutes. During the injection, prickling in the vagina; during the day, frequent stinging in the region of umbilicus; in the evening, portio vaginalis loosened; stings renewed during the night. Third day.—Morning and evening, each time half an hour; prickling in the vagina; in the course of the day, the presenting head could be reached; in the night, labor-like pains; and, towards morning, contractions of uterus, which ceased after a time. Fourth day.—Tingling during the thirty minutes of the injection; os, dilating. Noon.—Painful persistent contractions; 6 p.m.—rupture of membranes; 7 p.m.—birth of living child, weighing three pounds; recovery, good.

The readiness with which this agent can be applied, and its simplicity, will recommend its trial; and it will be interesting to know whether the sufferings of labor can be mitigated thereby.

The power of ergot is variously estimated, and some deny its efficacy. Drs. Delafield and Gilman have respectively authorized me to refer to two cases under their own observation, where ergot, and ergot alone, brought on expulsion of the ovum.

In Dr. Delafield's case, there was deformity of the pelvis, demanding craniotomy in her first labor. When about seven months and a half gone in her second pregnancy, Dr.



Delafield brought on the expulsion of an unmutilated, but still-born fœtus, by the administration of ergot.

In the case which came under the cognizance of Dr. Gilman, the ergot had been taken in ten grain doses, frequently repeated during two days, with the effect of procuring abortion.

In *Ranking's Abstract*, No. 8, p. 250, may be found the statistics of five hundred and twenty-four cases in which premature labor had been induced. In forty-five cases ergot was given, and the fate of thirty-eight children noted, of whom twenty-three were born alive, though twelve out of that number died within thirty-six hours.

In fact, the uncertainty of this remedy, and the greatly increased risk to the child, warrant the disfavor with which it is now regarded.

Galvanism is entitled to farther trial. The result would not appear to be much affected by the position of the poles.—*Vide Lond. Lancet*, 1854, Jan., p. 26-27.

Rodenberg recommends the introduction within the cervix of a bougie, promptly withdrawn, and frequently re-introduced. He points to fifteen cases, in fourteen of which the children were born alive; and when the youngest of that number had reached the age of two years, seven of them were known to be alive.—*Gazette Méd.*, 1853, No. 26.

Zuydhoek recommends the introduction of a wax bougie, two or three lines in diameter, between the anterior wall of the uterus and the membranes, and leaving it there for a length of time—a method preferred by Dr. Lehman, of Amsterdam.—*Brit. and For. Med. Chir. Rev.*, April, 1851, p. 546.

Sponge tents were used by Kluge, on the same principle; and, when made of various sizes, well compressed and smeared with ointment, were adopted by Prof. Simpson.—*Gaz. Méd.*, 1852, No. 26. *Braith. Ret.*, XVII., p. 218.

The separation of the membranes, to some extent without rupture, was chiefly advised by Prof. Hamilton, of Edinburgh; while Cohen proposed to attain the same end by the injection into the uterus of about  $\text{ʒviiij.}$  of tar water.

Dr. Næggerath gives the credit of the idea that premature labor might be induced by intra-uterine injections to Schweighauser, of Strasbourg, and its introduction into practice to Cohen.

It has, perhaps, been more customary to puncture the membranes than to use any other method; nor is the procedure so fatal to the child as might, *a priori*, be anticipated,

since out of one hundred and eighty cases recorded by Hoffman, one hundred and three were born alive. Yet, to diminish the risk to foetal life, Meissner, of Leipsic, preferred to puncture the membranes at some distance from the os, by means of a stilette, and allow but a small quantity of the water to escape. In 1841, he gives eight cases of success to mother and child.—*Gaz. Méd.* 1852—2.

It would seem, indeed, from a review of the subject, that no plan offers the requisites of safety, simplicity, and celerity, in a greater degree than the douche, unless the use of carbonic acid gas should prove preferable; but the advantages of the douche, in the induction of labor, are small and infrequent, when compared with the assistance to be derived from its powers in relaxing the rigid os and cervix uteri, in lingering labor from this cause.

In the writer's judgment, the following case is an illustration, though by no means a conclusive one, of its value, where copious blood-letting had proved inefficacious.

At one A.M., December 6th, my friend, Dr. H. S. Hewit, requested me to meet him in consultation, and brought me to the bedside of a plethoric, strongly built primipara, aged 34. She was comatose, and breathing stertorously; her face, feet, and ankles œdematous; the blood trickling from a lacerated tongue. She had not exhibited one ray of consciousness from three o'clock in the afternoon; and from that time, convulsions had succeeded each other with about half-hour intervals. No foetal heart was audible, and vaginal examination disclosed a dry and hot vagina; a long, hard, and undilated cervix, with the uterus at about the sixth or seventh month of gestation. I could, with much force, thrust my finger far enough to be sure that I could detect the membranes, with some portion of a foetus presenting—perhaps, the head. There was scarcely any urine in the bladder, and that, when drawn off with the catheter, and tested with nitric acid, became completely coagulated.

Dr. Hewit had seen her for the first time, at about nine P.M., and with Dr. Stewart, had withdrawn nearly one quart of blood from her arm, which did not coagulate well; hyd. chlor. mit. ℞j, on back of tongue. On inquiry, we learned that she was reserved in disposition, and much depressed in spirits of late, from domestic trouble; still, our informants could now remember that she had been obliged to lay aside her rings of late, as they had become inconveniently tight—that her face had been noticeably swelled, and that, on the

morning of the 5th, she had suffered greatly from pain in the head; the convulsion came suddenly, without warning to them.

We noticed, in her motions and her convulsions, that the left arm and leg did not stir. Some four hours having elapsed since the blood-letting, without effect on the os; about a gallon of warm water was played against the uterine orifice. Within an hour's time, the vagina became perceptibly relaxed, and the os perceptibly softened. In a short time longer, my finger could reach the membranes with ease; and, more anxious for the patient than the trial of the remedy, punctured the membranes with the stilette, and recognized a breech presentation. In little more than an hour longer, two fingers could pass readily through the cervix. There was not sufficient space left for a blunt hook, but it occurred to me, that a strong wire bent in the form of a hook might be of service. A piece was procured, and bent with strong forceps. The first effort to introduce this failing from the size of the curve, this was now made smaller, and fastening it around the leg of the child, I was gratified to find that it sank into the flesh, and would allow strong traction without slipping; with this, and one finger, the pelvic extremity was withdrawn, and then the remainder of the body extracted. The placenta was taken away entire. The womb contracted nicely, and the woman lost no blood from the vagina. During the removal of the child, the patient had one convulsion, in which she raised the left arm; but, while injecting the water, and while delivering her, she was placed in the ordinary position for the forceps, with her feet confided, separately, to women—and at neither time did she move the left leg, though she used the other with considerable force.

No return to consciousness took place; blisters were applied to temples and the nape of the neck, but at about ten A.M., she died in a convulsion, after twenty hours of unconsciousness. No post mortem allowed.

ART. V.—*On the Value of the Red Line of the Gum in the Diagnosis of Phthisis.* By D. D. SAUNDERS, M.D., and JOHN C. DRAPER, M.D., Bellevue Hospital, N. Y.

DR. THOMPSON, in his work on pulmonary consumption, in speaking of this red line says, "Considerable attention to this inquiry has impressed me with the conviction of the frequent existence, in consumptive subjects, of a mark at the reflected edge of the gums, usually deeper in color, than the adjoining surface, and producing a festooned appearance, by the accuracy with which it corresponds with the curve of the gingival border; this mark is in some patients a mere streak, in others, a margin, sometimes more than a line in breadth. In the most decided cases, this margin is of a vermillion tint, inclining to lake. As a general rule, the line is most distinct round the incisor teeth, but it is frequently apparent also round the molars. I am not without a suspicion that the form of the mouth influences the direction in which the margin is most obvious; patients with a long upper lip applied closely over the jaw, often presenting around the incisors either no line, or one only slightly marked, while around the canine teeth this margin is well delineated. In toothless individuals, when the gums smoothly cover the sockets, no mark is observable, but when imperfect stumps remaining prevent the smooth adjustment of the surface, the streak is found."

The object of the following statistics, is to test the utility of the red line as an element in the diagnosis of phthisis. The four hundred and fifty-one cases, from which they were taken, are all of the patients at present under treatment in the wards of Bellevue Hospital. Table No. 1, is intended to show the frequency of its occurrence, without regard to the disease. The terms used at the head of the table, are *no line*, *slight*, *good*, and *excellent*. The first is used when no trace of a line exists; *slight* is used when the line is faintly marked on three or four gums; *good* is used when the line is pretty well marked on the gums of the upper jaw; *excellent* is used when the line is full, plain, and very marked on all of the gums.

The whole number of cases examined, (four hundred and fifty-one,) in whom the red line existed, is as follows :

TABLE NO. I.

| No. of cases. | No line. | Slight. | Good. | Excellent. |
|---------------|----------|---------|-------|------------|
| 451           | 106      | 96      | 175   | 74         |



Table No. 2 comprises one hundred and sixteen cases of phthisis, in all its stages. Under the head of stages, the numbers 1, 2, 3, are intended to denote the divisions commonly used in describing this disease.

TABLE No. II.

| Stages. | No. of cases. | No line. | Slight. | Good. | Excellent. |
|---------|---------------|----------|---------|-------|------------|
| 1       | 26            | 7        | 3       | 9     | 7          |
| 2       | 21            | 4        | 5       | 8     | 4          |
| 3       | 69            | 17       | 17      | 21    | 14         |
| Total   | 116           | 28       | 25      | 38    | 25         |

From this we find one-fourth of the cases have no line, another fourth have it very slightly developed, leaving one-half in which it is plainly marked. It may also be observed that the stage in which the disease exists, does not have any material influence on the line. Table No. 3 comprises all varieties of disease except phthisis.

TABLE No. III.

| No. of cases. | No line. | Slight. | Good. | Excellent. |
|---------------|----------|---------|-------|------------|
| 335           | 78       | 71      | 137   | 49         |
| Total 335     | 78       | 71      | 137   | 49         |

In this table we find more than three-quarters of the cases have the line more or less developed, though only a little more than one-half have it well shown. This table would rather leave the impression, that this line occurs in most chronic diseases, as stated by Drs. Thompson and Frederick, oftener than in any other condition, though the following table conflicts with that opinion. Table No. 4 comprises thirty-seven cases of pregnant, and recently delivered women, in whom no pathological lesion existed.

TABLE No. IV.

| No. of cases. | No line. | Slight. | Good. | Excellent. |
|---------------|----------|---------|-------|------------|
| 37            | 5        | 6       | 11    | 15         |

In the thirty-seven cases, we see the line existing in thirty-two, though only slightly in six. The results of this table deserves some consideration, as it has been stated by most authors who have investigated the subject, that the line is peculiar to chronic blood diseases; this view, however, is not sustained by the above table, as no disease existed in any of the thirty-seven. It should be remarked, also, that the line occurs more frequently and is better marked in the pregnant woman than in any cases examined. The number of cases at our command will not justify a conclusion; yet they may serve as a basis of further investigation. The

question might be asked—May not this line be considered in connection with the other symptoms of pregnancy?

Table No. 5 comprises thirty-two cases of uterine disease, and is intended to show the difference between the physiological and pathological conditions of the uterus.

TABLE NO. V.

| No. of cases, | No line. | Slight. | Good. | Excellent. |
|---------------|----------|---------|-------|------------|
| 32            | 14       | 7       | 10    | 1          |

In the thirty-two cases examined, there were nearly one-half where the line did not exist, and only one-third in whom it was pretty well marked. It may be observed that there is considerable difference between tables No. 4 and 5, the line occurring nearly in an increased ratio in the two conditions of the uterus, being only very well marked in a single instance when the organ is diseased.

Table No. 6 is intended to demonstrate the influence of sex on the line.

TABLE NO. VI.

|             | No. of cases. | No line. | Slight. | Good. | Excellent. |
|-------------|---------------|----------|---------|-------|------------|
| Female..... | 234           | 57       | 55      | 80    | 42         |
| Male.....   | 217           | 49       | 41      | 95    | 32         |

From this we see no marked difference in the frequency of its recurrence in the different sexes.

Table No. 7 shows the influence of age.

TABLE NO. VII.

| Age.     | No. of cases. | No line. | Slight. | Good. | Excellent. |
|----------|---------------|----------|---------|-------|------------|
| below 20 | 48            | 21       | 9       | 10    | 8          |
| 20 to 30 | 185           | 38       | 37      | 80    | 30         |
| 30 to 60 | 199           | 42       | 44      | 78    | 35         |
| above 60 | 19            | 5        | 6       | 7     | 1          |
| Total    | 451           | 106      | 96      | 175   | 74         |

Age exerts no influence on the occurrence of the line.

The following general conclusions may be drawn from the above statistics.

1. The red line, though it occurs frequently in phthisis and chronic blood diseases, is by no means characteristic of them.

2. In pregnant and recently delivered women, the line occurs more frequently and better marked than in any cases examined, and may, perhaps, deserve consideration in connection with that condition.

3. That age or sex exercise no influence on the existence of the line.

ART. VI. -- *Reports of the Practice of the New York, Bellevue, and Brooklyn Hospitals.*

NEW YORK HOSPITAL.

*Historical Sketch of the Hospital.*—The charter of the New York Hospital was granted by the Earl of Dunmore, Governor and Commander-in-Chief of the province of New York, on the 13th of June, 1771; some respectable and public-spirited inhabitants of the city having, the year before, subscribed considerable sums, for the purpose of establishing an institution of this kind. The credit of its origin is due to Dr. Samuel Bard, who is to be regarded not only as the principal founder of the hospital, but also of the system of medical instruction in this state, and by whom, together with Drs. Peter Middleton and John Jones, a petition was first presented for a charter of incorporation.

Contributions to this object were also made by many inhabitants of London, and other places in Great Britain. In 1772, the legislature of the province of New York granted an annual allowance of £800, (\$2,000,) in its aid, for twenty years. Five acres of ground were purchased, in 1773, for the erection of a suitable edifice, and the foundation of a building was laid on the 27th of July, 1773; but on the 28th of February, 1775, when it was almost completed, it accidentally took fire, and was nearly consumed. The effects of the war of independence, and the general derangement of affairs, interfered so much with the complete execution of the plan, that the house was not in a proper condition to receive patients until the 3rd of January, 1791, when eighteen were admitted.

Its funds were supplied, from time to time, by grants of money by the legislature of the state, and donations from private citizens, and by the payment of certain sums by the General Government for the board and medicine of seamen, of which class a certain number were constant inmates.

A large and substantial building, erected in 1806, for the purpose of an asylum for insane patients, having been rendered useless by the establishment of the institution for this purpose at Bloomingdale, was remodelled and repaired as a hospital for seamen in 1825, and devoted to that object, under the name of the "Marine Department of the New York Hospital." In 1841, a building, corresponding in general appearance with the marine building, was erected at an expense of about \$50,000, on the north side of the hospital grounds. During the same period, a stone out-building was fitted up, for *post mortem* examinations, and for purposes of medical instruction, and also for accommodations for the coroner and his jury, when their services were needed.

The appearance of hospital gangrene in 1849, and the evident tendency to deterioration of the air of the main building, so that the convalescence of patients, after surgical operations, was not so rapid nor so certain as might have been expected, led to extensive arrangements for an entire change in the mode of ventilating and warming that edifice, which were completed in the autumn of 1850, at a cost of

above \$50,000. By these measures, a very thorough system for the admission of pure air, by means of lofty external air-shafts on the hospital grounds, was introduced, together with very effective arrangements for draining off the vitiated air. A supply of air, heated by steam-pipes, was provided, capable of raising the temperature of the wards to 68° Fah., at any state of the weather externally, and to keep up such a temperature throughout the severest winter; and other alterations made in the wards, etc., calculated to promote the comfort as well as the health of the patients. These changes were marked by a gratifying change in the improved ratio of cures and diminished proportion of deaths.

The claims for hospital aid, arising from the rapid growth of the city, the immense and continued influx of strangers, and the augmented navigation of the port, now began to increase beyond the means of meeting them, and the Governors determined to substitute for the Marine Hospital a new edifice of the first-class, capable of accommodating at least two hundred patients, or even more, in case of emergency. An appeal for the means of accomplishing this object was made to our citizens, which was so liberally responded to, that, in the beginning of 1853, the necessary arrangements were made for a new spacious three-story stone building on the site of the former Marine Hospital. This was completed and opened in April, 1855, and has probably no superior in its supply of water, baths, water-closets, the height and spaciousness of its apartments, its ventilation, mode of warming, and all other important points of hospital architecture. The cost of this building, including that of furniture and fixtures of all sorts, amounted to a little more than \$140,000.

The buildings of the hospital devoted to patients now consist of three. The principal one, called the *Main Hospital*, is built of gray stone, and extends in front one hundred and twenty-four feet, is fifty feet deep in the centre, and eighty-six feet deep at the wings, which project on each side. It consists of three stories, the height of the whole above ground being about fifty-two feet, and contains six wards for the sick, in which about one hundred and fifty patients may be comfortably accommodated. This building also contains a theatre for surgical operations, capable of holding about four hundred persons, besides several other rooms for different purposes.

The building denominated the *South Hospital* is also built of gray stone, and extends one hundred and twenty-eight feet from east to west, and ninety feet from north to south, and consists of two projecting wings, and an intermediate or central portion, and will accommodate from two hundred and forty to two hundred and fifty patients, affording each of them not less than one thousand feet of cubic space, and a circulating amount of air when the ventilating apparatus is in operation, of not less than half a mile an hour, and, on an average, probably three or four times that amount.

The *North Hospital*, erected in 1841, stands on the north side of the main building, and is built of blue granite and brown sand-stone. It is ninety-three feet by sixty-three, and three stories high, exclusive of the basement story, and is calculated to accommodate very com-



fortably about one hundred and fifteen patients. The whole buildings will accommodate over five hundred patients.

The care of the patients devolves upon four attending physicians, and six attending surgeons, who visit the wards daily each in his turn, at stated periods, and who perform their services gratuitously. There are two surgical divisions, each under the immediate care of a resident surgeon, always residing in the establishment, and there is also a resident physician always living at the hospital, each of whom has two assistants, and both residents and assistants must have received the degree of M.D., and have been pupils of a practicing physician for three years. They are appointed for eight months each, the next in seniority succeeding on the termination of the eight months, if his conduct and character have appeared satisfactory during their service. These posts are open to all graduates who have been pupils of a practicing physician for three years, the place being assigned to those found on examination by the attending physicians and surgeons, to be the best qualified.

Students, as well as physicians, are permitted to attend the visits of the physicians and surgeons, and to witness the operations, upon presentation of a ticket, which is furnished to them gratuitously by the Superintendent, on presenting evidence of their character and good standing. Clinical remarks are made by the physician and surgeon in attendance during these visits, and also in connection with the different operations performed. Post-mortem examinations are also made in their presence, and different means to render available for instruction the large amount of material afforded by so extensive an institution, thus favorably situated for the treatment of disease and of casualties. There is also a library consisting of more than six thousand volumes, confined entirely to medicine and surgery, and the collateral branches of science specially connected with the healing art, and which contains many splendid and costly works on anatomy and natural history.

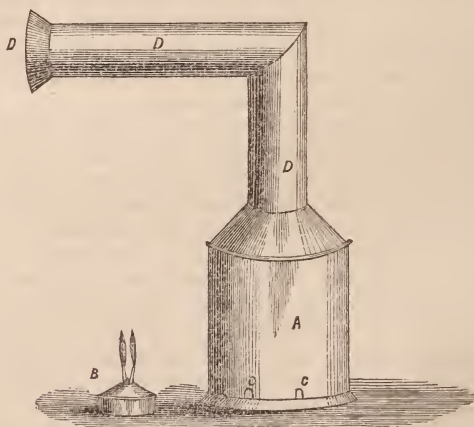
The whole number of patients received into the hospital from the 1st February, 1792, shortly after the re-opening of the Hospital, to 1st January, 1856, has been 106,111, of whom 77,390 discharged *cured*, and 4,768 as *relieved*. Of the whole number, 10,983 have died, including a large number brought to the hospital in a dying state from casualties. Deducting the cases of casualties in persons who died within a few hours, the ratio of deaths in 1853, was  $5\frac{5.7}{100}$ ; in 1854,  $5\frac{8.5}{100}$ ; in 1855,  $5\frac{7.0}{100}$  per cent. The number of admissions have been gradually increasing since the institution was opened, and during the 5 years ending on the 1st of January, 1856, there were 16,948 admissions, making an annual average of nearly 4,000 patients who received the benefits of the hospital in those years.

We have furnished this brief sketch of the New York Hospital for the benefit of our distant readers, who may thus be enabled to form some idea of *a part* of the advantages afforded by our city for clinical instruction, advantages we fear not fully appreciated by some of our brethren residing in our midst. From this and other large hospitals here, we hope to be able to furnish matter of both interest and value from time to time, and to show that all our advantages are not suffered to pass without improvement, and that some at least are willing to

share with others the experience they are gaining from their connection with them.\*

*Cases of Albuminuria treated at the New York Hospital during the three years ending November 1, 1856.* By OSCAR G. SMITH, M.D., late Resident Physician of the Hospital.

THE following cases of albuminuria occurred at the New York Hospital during the three years ending November 1, 1856, and include those of mere congestion of the kidneys, those known under the name of desquamative nephritis, and the more severe forms of disease classed under the head of Bright's disease, and comprise, also, those which were unsuccessful in their result, as well as those which terminated more favorably. All the cases were accompanied by general dropsy, which commenced, in by far the greater proportion of cases, in the lower extremities, and but few were attended with cardiac complications. They were mostly treated according to the diaphoretic plan, the effects of which mode of treatment, in the different forms of albuminous urine, it is the more especial design of this paper to record. The means used to promote diaphoresis were the internal use of spiritus mindereri, in combination with ipecac., usually half an ounce of the former, and half a grain of the latter, three or four times a day; and the external use of the hot-vapor bath, three or four times a day, for the space of from a quarter to half an hour; the object of this plan being to relieve the kidneys by free action upon the skin, a plan more rational and usually more successful in its results than that in which diuretics are employed.



The apparatus used for applying the hot-vapor bath, and which may be employed, as it frequently is in the hospital, for producing warmth in the shortest time possible in the stage of collapse from different causes, is, at the same time, simple in its construction and easy in its management, as may be seen from the accompanying cut.

\* We are indebted for the above sketch of the hospital, to a short history of it recently prepared by Julian C. Verplauck, Esq., one of the Board of Governors, by which it has been published.

It consists of a large canister, or cone-shaped vessel (A), without a bottom, in order that the spirit-lamp (B), placed within it, may rest on the floor to heat the cold air entering by apertures (C C) in the sides of the canister, near the bottom. The heated air naturally ascends to the pipe (D D), and is conveyed along under the bed-clothes about the patient, establishing any degree of heat sufficient to bring about perspiration of skin. The apparatus is constructed of tin, and applied by placing the lamp within it, upon the floor beside the bed, while the mouth-piece of the pipe (D) is under the bed-clothes of the patient.

The introduction and prosecution of this mode of treatment in the New York Hospital was by the late Dr. Swett, aided by the co-operation and services of the then house physicians, Drs. Swift and Chapin.

*Case 1.*—The first case presented is, what might be called, a type case. (Dr. METCALFE in attendance). The patient was a girl about 16 years of age, single, who had menstruated, and who was received into the hospital on account of an attack of convulsions, followed by insensibility. She was first seen at her home, when she lay comatose, pale, eyes closed, and surface cool. Her friends informed us that she had passed very little urine then, and had had two convulsions within four days, of an epileptic character; her tongue had been bitten and swollen. She was removed to the hospital on the same day, March 23, 1855, and the next day had regained her sensibility. Her account was, that she had had an attack of rheumatism the autumn previous, and, on recovering from it, first noticed œdema of feet and legs. This, however, did not prevent her going about, nor distress her much until the latter part of February (the month before coming to the hospital), when she felt pain in her legs, and distress from their swelling; she also had pain in "the small of her back." She never had suffered in a similar way, and never had had convulsions before; complains of pain in back still, and has a general feeling of languor and uneasiness. There is present some puffiness of face. Appearance decidedly anæmic, or, what might be styled with a good deal of correctness, albuminous. No abnormal sound of heart; lungs clear; passes urine; bowels open; skin, dryer than natural.

March 24. On an examination of her urine by the microscope, it was found to contain fibrinous casts and epithelial cells; its specific gravity was 1017; it was cloudy, and deposited albumen when tested. She was placed under treatment, and ordered hot-air bath in the usual way, and spts. mind. and ipecac. mist. March 30. Urine contains abundant fat globules and fibrinous casts. Since yesterday, has had a diminished quantity of urine, and some coma, which has passed off to-day; skin becoming moist under the influence of the bath.



We give a table, showing the quantity of urine passed day by day, and the gradual improvement in symptoms until recovery :

| Date.   | Quantity passed. | Remarks and Notes.                                                                | Date. | Quantity passed. | Remarks and Notes.                                                                                   |
|---------|------------------|-----------------------------------------------------------------------------------|-------|------------------|------------------------------------------------------------------------------------------------------|
| April 4 | 44 oz.           | of urine in 24 hours.                                                             | May 1 | 58 oz.           | Urine rendered a little opaque by heat. Spec. Grav. 1009.                                            |
| " 8     | 47 oz.           | " Spec. Grav. 1017.                                                               | " 2   | 69 oz.           |                                                                                                      |
| " 12    | 56 oz.           | " The œdema of feet disappearing                                                  | " 3   | 75 oz.           |                                                                                                      |
| " 13    | 48 oz.           | Slight pitting on pressure. Spec. Grav. 1010.                                     | " 5   | 54 oz.           | Albumen greatly diminished.                                                                          |
| " 17    | 56 oz.           | Urine still albuminous                                                            | " 10  | 32 oz.           | Patient's general health is rapidly improving under the iron and bark.                               |
| " 18    | 60 oz.           | " Spec. Grav. 1009.                                                               | " 14  | 58 oz.           | No dropsy; walks about.                                                                              |
| " 21    | 60 oz.           | Appearance still anæmic.                                                          |       |                  | After this date, the patient continued to rapidly recover, and left the Hospital on the 21st of May. |
| " 23    | 50 oz.           |                                                                                   |       |                  |                                                                                                      |
| " 24    | 48 oz.           | —Quantity decreas'g.                                                              |       |                  |                                                                                                      |
| " 26    | 54 oz.           | Spec. Grav. 1009.                                                                 |       |                  |                                                                                                      |
| " 28    | 69 oz.           | Largest quantity passed yet.                                                      |       |                  |                                                                                                      |
| " 29    | 56 oz.           | Was placed upon additional treatment of tr. cinchona comp. and ferri ammonio cit. |       |                  |                                                                                                      |

*Case 2.*—The next case (Dr. GRISCOM in attendance), was a seaman, about 30 years old, born in Ireland, who also had convulsions. He had a severe convulsion in the carriage, while being brought to the hospital, and another not long after his admission, when he became quite comatose. He complained of great distress in the head, and pains in the back and loins. His limbs and whole body were enormously distended with the fluid in the cellular tissue. The lungs were œdematous, breathing impeded, and he suffered much discomfort from the general distension. He was admitted on the 21st of May, 1855. May 22. Patient passed but little urine during the night. He is rather comatose, and answers slowly but correctly; states that he first noticed swelling of the legs two months ago. He was obliged to pass his urine frequently, getting up at night. On testing his urine, albumen was detected in it, spec. grav., 1030. Whole lower portions of body and limbs are enormously distended, and the hands and face œdematous also. Quantity of urine passed in twenty-four hours, sixteen ounces. Ordered—pulv. purgans, ʒi, statim; spts. nit. dulc. ʒi doses p.r.n. May 25. Is less comatose; passes urine more freely, twenty-two ounces in twenty-four hours; quantity of albumen large. Placed upon spts. minder., and hot-air-bath. May 29. Thirty ounces of urine passed in a day; spec. grav. 1020. May 31. Distension of legs, thighs, scrotum, cellular tissue of penis and abdomen is enormous; face still œdematous. Hot-air bath continued, and pulv. purgans p.r.n. June 1, 1855. (Dr. J. M. SMITH now in attendance.) Passes thirty-six ounces in twenty-four hours; spec. grav. 1020. June 5. Passes fifty-six ounces in twenty-four hours; spec. grav. 1016. June 7. Is improving; œdema of face has subsided, as well as that of the upper extremities; the abdomen, scrotum, penis,



thighs, and feet still swollen; passing seventy ounces of urine in twenty-four hours. Continue treatment. June 11. Seventy-two ounces passed, spec. grav. 1014; the quantity of albumen in the urine diminished. June 14. Urine passed last twenty-four hours sixty ounces. June 22. Urine passed last twenty-four hours forty-four ounces; the quantity has been fluctuating for the past week between thirty, forty, and sixty ounces; the spec. grav., three days ago, was 1013, and on testing the urine, the albumen was found abundant; it was observed to-day, which may be thought worthy of record, that, in the application of the hot-air-bath, if the temperature about the patient be too elevated, diaphoresis will not be produced, but the patient will suffer very much; but on depressing it to the proper degree, perspiration would be poured out profusely, much to his comfort. July 3. Passes forty ounces; spec. grav. 1015; the albumen still abundant; abdomen greatly distended; respiration, thoracic; treatment suspended. Was ordered a diuretic liniment, consisting of tr. scill., tr. digitalis, and lin. sapon. comp., to be applied over the abdomen, and directed to take tr. ferri muriat. internally. July 4. Passed thirty-two ounces in twenty-four hours. July 6. Passed forty-four ounces in twenty-four hours. Ordered—pulv. purgans. July 12. Ordered—iod. potass.; passes forty ounces of urine; no effect of medicine. July 13. Was placed, to-day, upon gallic acid, five grains every four hours. July 14. Considerable distension of the feet, legs, and abdomen; breathing unaffected; patient comfortable; forty-four ounces of urine in twenty-four hours. July 18. To-day the operation of paracentesis abdominis was performed, and fourteen and three-quarter quarts of clear, serous fluid drawn off; had passed thirty-six ounces of urine. July 19. Passed, since yesterday, sixty-nine ounces of urine; the wound opened spontaneously, and eight pints of fluid passed away. July 21. Was ordered pulv. purgans, p.r.n. July 22. Ordered—gallic acid. July 27. Placed again upon tinct. ferri muriat.; is better: passed forty-four ounces of urine in twenty-four hours. July 29. Patient sits up. August 5. Passes forty-two ounces of urine in twenty-four hours; improving. August 8. Is able to travel, and desires to go home to Canada, and left the hospital to-day in a much better condition than on admission, although far from being well; his feet and legs were still œdematous, and albumen existed still in his urine.

*Case 3.*—The following case shows the comparative results of the diaphoretic and the diuretic treatment, as the patient was subjected to both while in hospital. Entered hospital February 20, 1854 (Dr. GRISCOM in attendance), F.A.R., æt. 53, mechanic, born in New York. One week before admission complained of pain in the abdomen and slight soreness of the throat, and immediately noticed œdema of the feet and face, which continued until three days ago, when he gave up his work and went to bed; no febrile excitement; urine slightly diminished in quantity; he thought he "had taken cold;" stated that for several years he had been liable to pains in the lumbar region; the pulse was natural; skin, moist and warm; bowels open regularly; there was œdema of feet, face, and abdomen; he had also cough, with dyspnœa, and sonorous rhonci could be heard over the chest, with

mucous rattle at the base of both lungs; countenance is pale; urine of fair color, passing one and a half pints in twenty-four hours, albuminous by heat and nitric acid, spec. grav. 1013; no cardiac complication; was directed to take infus. diosm. crenata, and mist. spts. mind. et ipecac., with baths pro re natâ. March 3. General condition improved; appetite good; skin freely relaxed; œdema of face has subsided, as has also that of feet; effusion, however, still in the abdomen; urine passed is more abundant, about two pints in twenty-four hours. The preceding treatment was now discontinued, and he was placed upon pil. Fothergill (consisting of cal., squills, and digitalis,) and the diuretic decoction of the hospital, (consisting of juniperi bacc., rad. senega, rad. scill. and spts. nit. dulc., with boiling water,) and the hot-air bath application, also, daily. March 10. Since the last date the œdema has been gradually subsiding; the feet still pit on pressure; urine passed in twenty-four hours has reached two pints and a half. Was then directed to take decoction of apocynum cannabinum. March 15. At times had attacks of dyspnœa, for which bleeding from the arm was directed, and which was repeated on the 19th, the dyspnœa becoming greater. March 28. Condition in no way improved; œdema of feet about the same; the abdomen less distended than it has been; the medicine (decoct. apocyn. cannabin.) was suspended on account of its disagreeing with his stomach. By microscopic examination, the urine was found to contain secreting cells, fat globules in considerable quantity, blood corpuscles, and uriniferous tubes; still albuminous; spec. grav. 1013. March 30. Has slight pneumonia of lower portion of right lung; was ordered elaterium, one-quarter of a grain, and a blister to chest. April 1. Has had entire suppression of urine for thirty-six hours, and became comatose, in which state he expired. No autopsy.

Case 4.—A boy, 14 years of age, a native of Scotland, entered hospital, April 21, 1854. (DR. SWERT in attendance.) He stated that he first noticed swelling of his hands and limbs four weeks before his admission; he continued to go about, but felt feeble, and lost his appetite; he slept well; before his present sickness, does not remember having been ill, neither of having a red eruption or sore throat; urine is high colored, and passes it frequently, often getting up at night for this purpose; has had pain in the small of the back, which is tender on pressure; his whole body, legs, and arms are œdematous now; there is also some effusion into the abdominal cavity, little dyspnœa, mucous rattles at base of both lungs; some cough; pulse, seventy-six and soft; tongue, and skin natural; perspires freely; no evidences of previous disease; albumen found to be abundant in his urine, and its spec. grav. 1017, of acid reaction, and containing "fibrinous casts and kidney cells." Was ordered to have half-a-dozen leeches to the region of the kidneys, and a daily application of the hot-air bath. On next day (April 22), lungs found normal, and the urine containing "cells and casts;" was ordered pulv. ant., grs. iij. every four hours. April 27. By microscopic examination of the urine, it was found full of secreting cells, and crystals of lithic acid. April 28. Ordered—carb. potass. May 2. No

excitement of pulse and skin; the swelling has subsided slightly in his legs, not much in the abdomen. May 4. Directed to take pulv. purgans. May 6. Urine found to contain crystals of lithic acid, fibrinous casts and cells. May 16. Face and abdomen less swelled; has been taking pulv. purgans for the last three or four days. May 19. Microscopic examination of urine shows a tendency in the cells to fatty degeneration; suspended pulv. purgans, and directed to take acet. potass. and acet. ferri. May 26. Examination of urine, again shows fibrinous casts, containing nucleated cells, some of the cells containing fat; patient is kept upon a tonic and diaphoretic course of treatment. Under this treatment he gradually improved until August 25, when, the distressing symptoms having been entirely relieved, and desiring to go home, he was allowed to leave; his urine was found to be still albuminous, but in a very slight degree, spec. grav. 1020.

*Case 5.*—A female, 17 years of age; born in Ireland; entered hospital February 25, 1854. (Dr. GRISCOM in attendance.) Two months previous to admission, without any assignable cause, noticed oedema, commencing in the feet, and appearing afterwards in the face, and followed by distension of abdomen; has suffered no pain in back; urine has been high colored, and quantity less than natural; skin, dry; bowels, regular; there was very general anasarca; eyes nearly closed; no tenderness over the loins; urine highly albuminous, spec. grav. 1013; quantity passed in twenty-four hours, one pint and a half; no complication of heart; was placed upon the mist. spts. minder. and ipecac., with hot-air baths. March 1. The dropsy of the abdomen and feet has almost disappeared, it exists still in the face; two days after the administration of the above, free perspiration commenced from whole surface of body, and has continued, with an increase of quantity of urine passed. Was now directed to discontinue the diaphoretic course, and be placed upon infus. diosm. crenata. March 28. Has some diarrhoea, for which she is taking opium and nit. argent.; on microscopical examination of urine, found numerous secreting cells containing some fat, blood corpuscles, and lithic acid crystals; no epithelial cells. March 29. Patient to-day has been rapidly failing; at three p.m. she had an attack of great dyspnoea, and soon died. No autopsy.

The few succeeding brief cases, taken together, show the speedy and certain relief from the disagreeable and often dangerous symptoms attending renal dropsy, by the diaphoretic treatment. Some are undoubtedly what Watson calls "active or febrile dropsy."

*Case 6.*—An Irish laborer; æt. 30; entered September 29, 1854. (Dr. BULKLEY in attendance.) He had not exposed himself in any way to extremes of temperature, had never suffered from dyspnoea or palpitation. He first noticed, two weeks before admission, some oedema of feet, which soon extended up to the body; has felt no pain in the region of the kidneys, and has passed urine naturally; on admission into the hospital his legs, scrotum, and penis were distended with fluid, there was no oedema of face or hands; sounds of heart, normal; skin, warm and moist; pulse, natural; passes about two pints



and a half of urine in twenty-four hours—albuminous. October 1. Was placed upon the hot-air bath to-day. October 11. Urine passed in twenty-four hours, two pints and a half; albuminous, spec. grav. 1021. October 13. Urine passed in twenty-four hours, two pints; perspires freely. October 14. Dropsical effusion has disappeared; no œdema of legs or scrotum. October 17. Passed three pints of urine, spec. grav. 1022. October 26. Symptoms having disappeared, he left the hospital; examination of urine showed no abnormal condition by microscope, no trace of albumen.

*Case 7.*—A laborer, about 30 years of age; born in Ireland; entered the hospital August 24, 1854. (DR. BULKLEY in attendance.) Has œdema of feet and legs; first noticed commencement of the anasarca in the face three weeks ago, which was a little puffy," and in a day or two had the œdema of feet and legs; he had, two weeks previous, "a check of perspiration," while heated, and was quite unwell for a week succeeding, with general febrile symptoms; after recovering, in some degree, attempted to go to work, at which time he discovered the puffiness of his face; at present has no pain or uneasiness in back, no tenderness there; he passes water frequently at night; urine scanty, spec. grav. 1020, and albuminous; heart, normal; pulse, not excited; skin, not unnaturally dry; bowels, regular. Ord.—local blood letting, by cups, over renal region, mist. spts. mind., ipecac. internally, and hot-air baths. September 14. Quantity of urine has gradually increased, from twenty-four to forty-three ounces passed to-day; œdema subsiding; skin perspires well, improving. October 3. Is entirely relieved of symptoms, and left the hospital.

*Case 8.*—A cartman, 47 years of age; native of Ireland; of large frame and general appearance of good health, entered October 6, 1854. (DR. BULKLEY in attendance.) His feet, legs, scrotum, and penis were very much distended with fluid, and there was also effusion into the abdomen. First noticed œdema of face and hands on rising in the morning, about a month before admission, but attended to his work until three days ago; he observed that the swelling extended from the face down the neck and trunk of his body, over the lower extremities; had some trouble in breathing; never had shortness of breath before, or palpitations; states he has suffered for a number of years from pain in lumbar region; passes urine often, but little at a time; its spec. grav. is 1011, and it is highly albuminous; pulse and respiration normal; rhythm and sounds of heart normal. October 8. Has passed twenty-eight ounces of urine since yesterday. Directed to take spts. mind. and ipecac. mist., and hot-air baths to be applied daily. October 10. Has passed fifty-two ounces of urine during last twenty-four hours. October 27. On 13th passed sixty ounces, and on 27th, fifty-six ounces, spec. grav. 1017, and since 13th as high as seventy-four ounces in twenty-four hours. November 2. Passed to-day ninety ounces of urine; yesterday eighty-two ounces; spec. grav. of urine 1016, quantity of albumen decreased. November 5. Discontinued medicine. November 10. Passed sixty ounces, spec. grav. 1013; November 23. Discontinued hot-air bath; spec. grav. 1016; passed



fifty-nine ounces. November 26. Sits up; passed forty-six ounces. December 2. Went out of doors five days ago, and to-day left the hospital relieved.

*Case 9.*—W. McC., a laborer, æt. 30 years; a native of Ireland; entered the hospital November 17, 1854, suffering from general dropsy. (DR. J. M. SMITH in attendance.) He had an attack of dysentery nine weeks before admission; on recovering, noticed some swelling of the abdomen, succeeded by anasarca of feet, legs, and body generally, for which he had been treated with diuretics, purgatives, etc., until the present time. Before his attack of dysentery, health was tolerably good; had no pain over kidneys; no signs of cardiac disease at present; urine is albuminous by heat and nitric acid; was put upon mist. spts. mind. and ipecac., and application of hot-air bath. November 10. Feet still œdematous; abdomen fluctuates also. November 18. Passed twenty-one ounces of urine since yesterday, spec. grav. 1013. November 20. Spec. grav. 1012; continued treatment until December 13, when he was discharged relieved.

*Case 10.*—A. F., æt. 30; a native of England; and a ship-carpenter; entered hospital December 21, 1854. (DR. J. M. SMITH in attendance.) His legs, thighs, abdomen, and scrotum, distended with fluid, and there was some puffiness of face and neck; the swelling has appeared for short periods in the legs, during the past three months; his feet, ankles, and legs, were œdematous two weeks before admission, and the swelling extended up the body, but would subside in the feet at night. Eight years ago, in St. John's, Newfoundland, was similarly affected for about a year, the anasarca being greater than at present; was under treatment for three months of that time, with warm baths and sudorifics, which relieved him of his trouble until three months ago. Patient is a strong, robust man, of temperate and steady habits, and of good general health; his urine deposits albumen copiously, by usual tests; its reaction acid, spec. grav. 1022; passes twenty-seven ounces in twenty-four hours; no cardiac complication. The usual diaphoretic treatment was directed. January 1, 1855. Passes thirty-two ounces of urine in twenty-four hours; has passed as high as forty ounces; skin perspiring, condition good. February 1. Spec. grav. of urine now is 1017; passes forty ounces; during the past month has ranged much less, thirty-six and thirty ounces. February 9. Discontinued internal medicine; urine albuminous still. March 5. The hot-air bath discontinued; passes twenty-eight ounces. March 13. Passes forty-eight ounces of urine, spec. grav. 1016, and still albuminous; anasarca has subsided very much; at the end of the month was discharged relieved; albumen was still detected in his urine. The same patient returned again on May 5, 1855, with general anasarca of whole body, and albuminous urine. It appears that, about a fortnight before his readmission, he noticed swelling of feet, legs, and scrotum, again; is passing twenty-six ounces of urine a day; was ordered hot-air bath. July 2. Dropsy decreasing, and almost entirely gone; directed tinct. ferri muriat. August 13. The gravitation of fluid into cellular tissue of legs is persistent when he rises; bandages directed to be applied to them. October 1. Discharged relieved.

The cases that relapse and return are very rare. The preceding is one, and the succeeding another.

*Case 11.*—H. McC., a laborer; 38 years of age; born in Ireland, entered May 31, 1855. (Attendance of Dr. GRISCOM.) During the past year has had anasarca of legs and feet, and effusion into abdomen; at times the swelling would disappear, and the limbs remain of their natural size for eight or ten days, and then the œdema would again return; face and hands have also been distended with fluid; œdema commenced in feet; passed urine frequently, and had to rise at night for this purpose; albumen is detected in the urine; was placed upon spts. mind., and application of hot-air bath daily; nothing abnormal about heart. June 11. Passes twenty-four ounces of urine in twenty-four hours, spec. grav. 1023. June 15. Passed thirty-six ounces. June 19. Albumen still abundant in the urine, spec. grav. 1027; twenty-seven ounces in twenty-four hours. June 29. Albumen still present, but in less amount; the patient to-day, discharged relieved, but returned, July 28, with considerable œdema of feet and legs; no morbid sound of heart detected; albumen abundant in the urine. August 1. Passes only twelve ounces; was ordered hot-air bath. August 7. Passed sixteen ounces, spec. grav. 1019. August 23. Quantity passed since last note has ranged from sixteen, eighteen, to twenty ounces daily; patient's aspect is anæmic; was ordered ammonio-citrate of iron and comp. tinct. cinchona. September 2. Passes twenty-three ounces of urine; is now taking tr. fer. muriat., gtt. xv. ter in die. September 16. Anasarca subsided. September 28. Patient better and improving; anasarca has subsided; passes more urine—thirty-six ounces in twenty-four hours; is taking tonics. October 8. Went from the hospital relieved.

*Case 12.*—D. E., a married female; 29 years of age; entered, May 31, 1855. (Attendance of Dr. J. M. SMITH.) Her feet and legs are œdematous; abdomen somewhat distended with fluid; passes urine frequently, which is found, on testing, highly albuminous; face and hands not œdematous—never have been; never had rheumatism; has always enjoyed good health; habits, regular; she first noticed œdema of feet three weeks ago; had pain in back, etc.; placed upon diaphoretic treatment. July 2. Dropsy has disappeared, but is still pale. Ord.—iron. July 13. Went out relieved.

*Case 13.*—M. D., a laborer; born in Ireland; 56 years of age; entered May 9, 1855. (Attendance of Dr. GRISCOM.) He first noticed œdema of feet and legs eight days ago, with some puffiness of face and hands at the same time; he "took cold," and had cough with expectoration, six weeks previously, the only illness complained of; not being intemperate, not subject to rheumatism, and never had anasarcaous swelling before; no cardiac complication; passes about thirty ounces of urine a day; urinates frequently at night; urine slightly albuminous, its spec. grav. 1012; placed upon diaphoretic treatment. May 12. Quantity of urine passed, has risen to sixty-two ounces in twenty-four hours. May 21. Quantity of urine to-day as high as seventy-two ounces, and on 23rd of May it reached one hundred ounces. June 2.

Quantity has been decreasing lately, being now sixty-eight ounces; spec. grav. 1010; symptoms improving. June 11. No albumen detected in the urine, spec. grav. 1007. Ord.—*tr. ferri muriat.*, from gtt. v. to xx. ter in die. July 19. Went out of hospital entirely relieved.

*Case 14.*—H. G., æt. 22; native of Germany; letter-carrier; entered hospital Sept. 1, 1855, (Attendance of Dr. BULKLEY.) Last spring he exposed himself to wet and cold, after which his legs became anasarcaous, and the swelling extended to the scrotum; had had no lumbar pains, and no œdema of face. On admission to the hospital, the legs were moderately œdematous, and face puffy; a moderate quantity of albumen in his urine, the spec. grav. of which was 1023; no cardiac complication; he had been using the ung. hyd. over his body before coming to the hospital, and was salivated profusely; mouth ulcerated, and teeth loose; placed upon diaphoretic medication, etc. September 7. Passes twenty-four ounces of urine a day, spec. grav. 1020; and on 23rd, passed forty-eight ounces. September 25. Passed fifty-two ounces, spec. grav. 1012, and the next day went out relieved.

*Case 15.*—J. M., æt. 37; born in Ireland; laborer; entered hospital October 26, 1855 (Attendance of Dr. BULKLEY.) About eighteen months ago he had an attack of tertian ague. First noticed anasarcaous swellings two months ago, about the insteps, succeeded by similar swellings of legs and abdomen. States he never drank liquors to excess, and never had rheumatism; has enjoyed good health, and been occupied in superintending laborers on railroads. On admission complained of no inconvenience from swellings; no evidence of loss of strength; face was puffy, and feet and legs œdematous; no pain referable to renal region; passed water often; bowels regular; tongue natural; skin warm, not perspiring; urine albuminous, spec. grav. 1021; passes thirty ounces a day; no cardiac complication. He was ordered to have wet cups to renal region, to take 3i pulv. purgans at night, and hot-air-bath thrice daily, and mist. spts. mind. and ipecac., three times daily. November 1. The swelling of feet, legs, and abdomen is rapidly disappearing. Continue treatment of diaphoretics, with addition of *tr. ferri muriat.* Passes forty-eight ounces urine daily. November 9. Dropsy almost entirely disappeared; albumen still in urine, passes thirty-two ounces a day. December 4. Dropsy entirely left him, and condition good. December 10. Went out entirely relieved.

*Case 16.*—J. D., æt. 26; born in New York; seaman; entered November 21, 1855. (Attendance of Dr. SMITH.) Had an attack, six weeks ago, of intermittent fever, and on recovery, noticed for the first time, œdema of feet and legs; health heretofore generally good; never had rheumatism. On admission, feet, legs, abdomen, and thighs anasarcaous; no lumbar pains; no cardiac disease; passes urine frequently at night, passes forty ounces in a day, spec. grav. 1015, and albuminous. Ordered—diaphoretic treatment. December 2. Swellings subsided. December 8. First attempt to-day at sitting up. At present, there is no œdema. Ordered—tinct. of iron. December 24. Went from hospital relieved.

*Case 17.*—C. P., a waiter; aged 36 years; entered February 8,



1856. (Attendance of Dr. T. F. Cock.) His appearance is pale and anæmic. On 1st January last, first noticed swelling of abdomen, which was followed by œdema of feet and legs; his face began to swell three weeks ago; has generally been well; never had rheumatism; noticed that he was obliged to rise often at night to urinate; no dysuria; no palpitations; no pains referable to back; no abnormal sounds of heart; the feet and serotum distended with fluid, and legs slightly œdematous; urine pale, frothy, and albuminous; passes twenty-eight ounces in twenty-four hours; no hepatic disease detected. Put under the usual treatment of hot-air-bath and spts. mind., etc. February 11. Passes thirty-six ounces of urine, and on the 18th passed fifty-two ounces, spec. grav. 1019. February 22. No anasarous swellings. Sits up. March 8. Went from hospital relieved.

*Case 18.*—C. C., æt. 26; female; single; entered hospital January 14, 1856. (Attendance of Dr. T. F. Cock.) Is suffering from anasarous swellings of the whole body. Her face, hands, feet, legs, and body are œdematous, which impedes her getting about. She first noticed swelling in her feet three months ago, and had pain in the back, occasional nausea, with head-ache; the œdema extended from feet up legs and body; since the 11th inst. has had œdema of face and hands; never suffered from rheumatism; menstruation regular; sleeps well at night; pulse 72, and rather feeble; respiration perfect; heart normal; tongue clean; appetite good; no nausea; bowels regular; has pains in small of the back; passes urine frequently, notices it especially at night; urine albuminous, passes seventeen ounces in twenty-four hours. Ord.—diaphoretic treatment. January 19. Has passed thirty-eight ounces urine since yesterday, and on January 20 had passed fifty-one ounces. February 5. Has passed fifty-six ounces during last twenty-four hours. February 25. No œdema of feet or face now; was allowed to sit up, but the feet became œdematous; she neglected to confine herself to bed, and the anasarous swellings became extensive; was again placed upon treatment in usual way. June 1. Dropsy rapidly disappearing, under tr. ferri muriat. and hot-air bath. June 17. Went from hospital relieved.

*Case 19.*—M. S., æt. 21; German; female; entered hospital July 3, 1856. (Attendance of Dr. BULKLEY.) With œdema of feet and legs, of four weeks duration; not referable to any cause; never had similar trouble before; no pain in lumbar region; no cardiac disease; menstruation regular; urine is scanty and albuminous, spec. grav. 1022, passes twenty-eight ounces in twenty-four hours; placed upon usual diaphoretic medication. July 12. Skin acts well under the bath; œdema of legs disappearing. July 25. Passes forty ounces of urine; action of skin less free; œdema diminishing; is under mur. tinct. iron. July 27. Sits up. August 6. Left hospital relieved.

The next case is the first of the cardiac complications. In the table of one hundred cases, reported by Dr. Bright, in 1852, the heart was hypertrophied; thirty-four of these were free from traces of valvular disease, and eleven of the thirty-four had some trouble of the aorta. In twenty-seven of the one hundred no affection of the heart



was detected. Anæmia is generally, and was in all cases, reported in this paper present, a lymphatic temperament predominating. The patient's look *albuminous*. Serous inflammations have not been observed to accompany these cases, more generally, if occurring preceding, and seeming to cause the trouble.

*Case 20.*—F. O., æt. 37; German; brass-turner; entered May 23, 1854. (Attendance of Dr. SWETT.) He was obliged to discontinue working three months ago, on account of the anasarca swelling and pain in his feet; he complains of no pain about the heart, but has shortness of breath and palpitation, on exertion—going up stairs, etc.; has noticed it three or four years; the œdema has extended from the feet up to his abdomen; no evidence of hypertrophy, but there is a roughness with the second sound of heart; he passes forty-eight ounces of urine in twenty-four hours, spec. grav. 3018, which is albuminous, and contains fibrinous casts. May 26. Discovered a blowing sound over the heart's apex, with first sound of the heart, and over the aortic valves, with second sound of heart; directed to have infus. digitalis,  $\text{ʒss.}$ , potass. bitart.,  $\text{ʒiv.}$ , to be preceded by pulv. purgans. June 12. Went from hospital relieved.

*Case 21.*—C. McM., æt. 34; seaman; born in New York; entered February 27, 1856. (Attendance of Dr. T. F. COCK.) He first noticed œdema of legs about four months ago; thinks it came on after exposure to cold; had a chill and pain in the back; was obliged to urinate frequently at night; has had rheumatism; hands not swollen on admission; never had scarlet fever, nor received any blow over the back. On admission into hospital, skin warm and perspiring; no dyspnœa, but some œdema of face; anasarca of feet and legs; no delirium or convulsion, but has had dizziness, dimness of vision, and headache, at times; bowels regular; passes sixteen ounces of urine in twenty-four hours, which is albuminous, and has acid reaction; a roughened systolic murmur detected over apex. February 29. Passes forty-eight ounces of urine daily; directed to have diaphoretic treatment; hot-air bath; spts. mind. and ipecac. March 1. Passes fifty-six ounces of urine; skin acts well. March 8. Passes fifty-two ounces, spec. grav. 1010; has no œdema of feet. April 14. Has progressed favorably under the diaphoretic treatment, and the anasarca of feet and legs had entirely disappeared; he then sat up, and was about the ward; in a few days some œdema of feet was noticed; he was then placed in bed, and bandages applied, but the whole legs becoming anasarca, the diaphoretic treatment was resumed. May 7. Ordered to take infus. apocynum cannab. May 8. The apocynum caused pain in bowels and vomiting, but no purging. May 10. Evacuations watery; medicine nauseates, directed to be suspended. May 17. Bowels quiet; placed upon spts. nit. dulc. and mindereri. May 27. Takes hot-air bath, but without effect; has anasarca of legs still. June 1. Discontinued the bath. June 7. Ordered to take infus. buchu. June 12. Recommenced the bath; urine deposits sediment; his condition is feeble; anasarca general over the body and face. Ordered—support. June 15. Hot-air bath has lost its effect upon the skin; discharges from bowels watery, have

been so several days without diminishing the dropsy materially; passes fourteen ounces of urine daily; some dyspnœa. Ord.—opium. July 4. Diarrhœa continued until the day before yesterday, when it ceased without medicine; swelling of the body reduced; passes forty-eight ounces in twenty-four hours; condition better. August 10. Whole body become very much distended with fluid for past day or two; has dyspnœa; no convulsions. August 11. Died; he had partial suppression of urine; no convulsion; dropsy very great and general; the heart was examined, post mortem, and its aortic valves found to be the seat of calcarious deposit; the kidneys weighed nine ounces, were flabby, and exhibited an enormous fatty degeneration.

*Case 22.*—J. H. C., æt. 40; Dane; artist; entered hospital September 11, 1855. (Attendance of Dr. BULKLEY.) He had enjoyed good health until two years ago, when he was attacked with fever and ague, after which he had rheumatism, followed by cholera; on convalescing from the last, had some remains of rheumatism, with diarrhœa, which was suddenly checked, and he then, for the first, noticed œdema of his limbs; on admission, his legs were œdematous; scrotum somewhat distended, and the abdomen slightly so; the face occasionally puffy; he has noticed pain in renal region heretofore, but has none now, and none on pressure there; urine passed frequently, and is scanty, thickly loaded with albumen; bowels inclined to be free; appetite good; passes eighteen ounces of urine daily, spec. grav. 1008; no cardiac disease. September 14. Put upon the diaphoretic treatment, with tinct. ferr. mur. September 20. One leg punctured by needles; bandages to other leg. September 29. Anasarca diminishing; passes sixty ounces of urine. October 28. The dropsy has disappeared, and the patient is up and about; passes sixty-two ounces daily, spec. grav. 1019. December 4. (Attendance of Dr. J. M. SMITH.) Is regaining flesh and strength; no dropsical effusion present. December 24. Had an attack of erysipelatous inflammation of face; urinates eighty, ninety, and one hundred ounces occasionally. January 2. Erysipelas has extended over the face, closed his eyes, enfeebled him greatly, and brought on diarrhœa; passages watery. January 4. Is sinking fast: delirium. January 6. Died. No autopsy.

*Case 23.*—T. McB., æt. 21; carver and gilder; native of New York; entered the hospital October 27, 1854. (Attendance of Dr. BULKLEY.) The whole body, legs, thighs, scrotum, and abdominal cavity were distended very much with fluid, the cellular tissue over the entire trunk pitting on pressure; there was also marked anæmia in the face, which was pale and puffy, and the eyelids œdematous. He first noticed œdema of feet fourteen months before; he had been at work, and, as he supposed, perfectly well, and on rising in the morning found he was unable to draw on his boots; discontinued work, and the œdema continued to extend gradually up the legs, but there was no effusion into the abdomen until two weeks previous; he had had no scarlet rash, no pain referable to the back, no dyspnœa, no cardiac disease detected; has taken only occasional purges; urine deposits albumen copiously, by heat and nitric acid, passes eight ounces

of urine daily, spec. grav. 1022. Ordered—hot-air bath, pulv. ipecac. composit., and tinct. ferri muriat. October 29. Passes twelve ounces in twenty-four hours; and October 31, twenty-two ounces. November 16. Passes twenty-three ounces in twenty-four hours, spec. grav. 1020. Ordered—pulv. purgans. to-night. November 20. Does not perspire freely. Ordered—spts. nit. dule. November 23. Spec. grav. of urine 1025; discontinued nit. spts. December 1. Urine decreasing, sixteen ounces last twenty-four hours; has diarrhœa; symptoms have not been relieved. December 6. Anasarca of body still present; is failing. December 7. Died at two P.M. No autopsy.

*Case 24.*—E. T. C., æt. 29; native of New York; hatter; entered hospital August 4, 1856. (Attendance of Dr. GRISCOM.) Has enjoyed ordinary good health; was in the hospital in 1848, with an attack of rheumatism; he is now pale; has an anxious countenance; considerable swelling of the limbs and scrotum from fluid. He says he has had, at different times, anasarcous limbs; has had pain in the back for last three or four years, pretty constantly; he has it at present, with nausea and looseness of bowels; urine albuminous, spec. grav. 1007; pulse, natural; skin, moist; sleeps poorly. Ord.—Magendie's solut. of morph. at night, opium for bowels, and the moderate use of hot-air bath. August 9. Appears to be better; anasarca diminishing. August 10. Continues nauseated; bowels still free; discontinued diaphoretic treatment. August 20. Is much enfeebled; diarrhœa not checked. August 21. Had partial suppression of urine, passing but two ounces last twenty-four hours, and died. On post mortem examination, the kidneys were found large, granular, and loaded with fat.

The following, and last case, has been one of the most interesting that has been in the hospital, on account of its clearness, successful treatment, and the definite symptoms of paroxysmal cerebral disturbance and renal congestion, as shown in the headache, referred to the forehead, occiput, and the bloody urine. This case is now in the hospital, convalescing, with not the least remains of anasarca.

*Case 25.*—J. S., æt. 43; soldier; native of England; entered hospital September 17, 1856. (Attendance of Dr. BULKLEY.) He has always enjoyed excellent health; never had scarlet fever or rheumatism, nor any dropsical affection before; some of his relatives have had dropsy, and have died with it. He states that, two weeks before entering the hospital, while laboring on the city wharfs, he drank considerable quantity of iced water, which gave him, at the time, a sensation of chilliness. At about three o'clock in the afternoon was taken with nausea and giddiness of head, and his fellow-workmen immediately noticed œdema of his face coming on; he discontinued work, and, in two days after, observed his feet and legs becoming anasarcous; his urine was of high color; he felt thirsty; appetite failed, and he had some fever. The œdema of his legs extended to the abdomen; had some dyspnœa, but no pains of the back until eight days before admission; he was obliged to rise at night to urinate; before admission had convulsions, with pains in his head, referable to occiput and



frontis, and high colored urine. On admission, was pale and anæmic; the feet, legs, scrotum, and abdomen were distended with fluid; face also puffy; and he was suffering from dyspnœa, so that he was obliged to sit up in bed; bowels, regular; appetite, poor; pulse, good, not excited; urine scanty for preceding week, and containing albumen, spec. grav. 1017, passing sixteen ounces in twenty-four hours; no cardiac disease; no disease of liver detected; lungs are œdematous. During the first night after entering the hospital, had slight convulsions; was comatose, and urine very scanty, which symptoms were relieved by administering spts. nit. dulc.; was placed upon diaphoretic medication next day. September 20. Had local bleeding, by cups and scarification, over the renal region, followed by a continuous poultice; passes nineteen ounces of urine, which is bloody; no fibrinous casts or fat; highly albuminous. September 25. Passes thirty ounces, blood has disappeared from it; continues diaphoretic treatment; skin acts freely under hot-air bath. October 1. Passes forty-eight ounces of urine, spec. grav. 1017; it is bloody again; has pain in the head. Ordered—to be cupped over back, and tinct. ferri. muriat. to be given internally; the anasarca is disappearing; no œdema of lungs. October 10. Had an imperfect relapse; was permitted to sit up, and imprudently went out of doors; the anasarca returned; abdomen became much swelled; there was disturbance of brain, and return of bloody urine; blisters to nape of the neck relieved him; diminution of urine, passed thirty-two ounces the last twenty-four hours. October 12. Passes sixteen ounces; some headache; same remedies continued. October 14. Head clear; passes forty-three ounces. October 16. Under full treatment; passes seventy ounces. October 17. Has some headache; passes eighty ounces, spec. grav. 1010. October 19. Head clear; anasarca disappearing. October 21. Passes one hundred and six ounces. October 22. Passes ninety-three ounces; has again disturbance of head and bloody urine. October 27. Passes ninety-two ounces; urine is only slightly albuminous, milky by heat, spec. grav. 1011; all dropsy disappeared; sits up and walks about, expecting soon to go out of hospital well.

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#### BELLEVUE HOSPITAL.

*Report of the Practice of the Second Surgical Division of Bellevue Hospital, for 1856.* By Dr. STEPHEN-SMITH, Attending Surgeon.

THE Second Surgical Division of Bellevue Hospital comprises six wards, having an aggregate of 94 beds. These are divided between the male and female patients, as follows, viz.: fifty-four males and forty females.

This Division has been in charge, during the past year, of Dr. JAMES R. WOOD, JOHN A. LIDELL, and STEPHEN-SMITH. From the record of cases kept under their supervision by the assistant surgeons, Drs. F. V. WHITE and J. G. JOHNSON, the following statistics have been compiled.



## FRACTURE OF THE CRANIUM.

*Case 1.—Fracture of the Base of the Cranium, with other severe injuries—Death on eleventh day.*—A. K., æt. 35; native of Ireland; mason by occupation; moderately intemperate habits, but of good constitution; was admitted November 16th, soon after the receipt of the injury.

His injuries were caused by a stone projected from a blast. They consisted of a perfect comminution of the lower maxilla, and a fracture of both superior maxillæ, so extensive and comminuted, that the entire upper jaw could have been easily removed. There was also a penetrating wound of the right shoulder, and a lacerated wound of the scalp.

Stimulants were freely administered, and reaction gradually took place. He was able to swallow liquids freely, and for the first four or five days, improved so much, as to give strong hopes of his recovery. He was able to get up and sit for a considerable portion of the day. During this time pieces of bone were frequently taken from his mouth, separating both from the upper and lower jaws. The superior maxillæ were both loosened throughout their entire extent, as was evident upon traction. The lacerated wounds sloughed, and gave rise to an offensive discharge from the mouth. There were no cerebral symptoms at any time observable, and no paralysis; his mind remaining clear.

On the eight day typhoid symptoms began to appear, and the patient from this time, sunk rapidly, and died on the eleventh day, from the receipt of the injury.

*Autopsy.*—On examination, the upper and lower maxillæ were found fractured into so many pieces, as scarcely to leave an outline of the original bones. On removing the fragments, it was discovered that the fracture extended upon the left side to the base of the cranium, which was involved in the injury. A piece of bone, nearly an inch in diameter, beneath the middle lobe of the brain, was found entirely loosened from its connections. There were no evidences of the inflammation of the meninges, or the parts adjacent to the fracture.

The penetrating wound of the shoulder was found to involve the joint, causing a compound comminuted fracture of the head and neck of the os brachii, and a fracture of the acromion process.

*Case 2.—Fracture of the Skull—Depression of Bone, with Laceration of the Membranes of the Brain—Trephining—Hernia Cerebri—Death.*—(Reported by JOHN GEORGE JOHNSON, Senior Assistant Surgeon.)—Patrick Welsh was admitted to Bellevue Hospital on Saturday, October 25, for an injury to the head, received while blasting rocks. He was a married man; forty years of age; temperate; of vigorous constitution; and had always enjoyed good health. On the day previous to his admission, he had been struck by a stone from a blast, while at work at the corner of 45th street and 4th avenue. The wound had been treated by a physician before his admission, who had simply approximated the edges of the wound by interrupted sutures. On admission, the sutures were removed, and a clotted mass of blood, hair, and dirt was found; and the wound also contained several inclosed small

gravel stones. On examination the right parietal bone was found to be fractured near the junction of the sagittal and lambdoidal sutures. A small triangular portion was depressed, and the inner table being larger than the outer, it was found impossible to remove it. At this time, thirty hours after the injury, the patient's pulse was sixty-eight, and full; he was very restless, so as to require two men to hold him on the bed, and somewhat delirious; on consultation, it was decided to remove the depressed portion of bone. The operation of trephining was performed by Dr. Stephen-Smith, assisted by Dr. J. R. Wood. After the removal of the depressed portions of bone, the dura mater was found to be lacerated, and some portion of the brain escaped. The wound was lightly dressed.

The effect of the operation was immediately apparent. The patient, before so restless, as to require force to retain him on the bed, soon fell asleep and remained quiet through the night; his pulse was sixty-eight, but softer than before.

Sunday, October 26.—Pulse 68. Patient rational, quiet, everything progressing well.

Monday, October 27.—Pulse 70, with a quicker beat than on the previous day. Patient more restless.

Tuesday 28.—Up to this time the dressings applied immediately after the operation had not been disturbed. These dressings consisted of four sutures, approximating the flaps, together with adhesive strips, and over the whole was placed a compress, held in place by a retaining bandage. This morning, paralysis of the left arm was first noticed and loss of sensation on the outer side of the left leg; but not on the inner side. Nothing abnormal was discovered either in the right arm or right leg. At noon, Dr. Smith removed the dressings, cleansed the wound; and new dressings, adapted to make slight compression, were applied. Soon after this change of dressings, the patient was attacked with convulsions; when all dressings were removed, and a simple poultice applied. The convulsions were limited to the paralyzed side, and continued to recur at intervals of half an hour during the night. The following prescription was directed:— $\mathcal{R}$  morphiae sulphatis, antim. et potass. tartratis  $\text{āā}$  gr.  $\frac{1}{16}$ . This was repeated every hour.

Wednesday, October 29.—The patient appears rather weaker; convulsions still continue at intervals of half an hour; fungus cerebri begins to protrude beyond the lips of the wound. Slight compression was directed to be made by compress and bandages. The convulsions did not recur during the following night; during the convulsions he retained his senses perfectly; he was aware of their approach and would request his friends to hold his head still, during their continuance.

Thursday, October 30.—Pulse was 68; from four, A.M., till half-past eight, A.M., the time of the morning visit, he had had eight convulsions; still he appeared refreshed with the rest he had had during the previous afternoon and evening, and wished to be allowed to get up and dress himself. Fungus cerebri now protruded from wound about  $\frac{3}{4}$  of an inch. The patient remained very comfortable till twelve o'clock, M., of this day, when he commenced having general convulsions. These would

come on every five minutes, or even oftener. The dressings during these, were applied twice a day, with only slight compression, and the wound syringed out during the night. From half-past ten, P.M., to eight, A.M., he had fifty convulsions; at half-past ten, P.M., his pulse was 90.

Friday, October 31.—Pulse 100, and feeble. Patient has always retained his senses—after each convulsion he would reply to questions put to him, would invariably say he felt well, and would always give notice when the convulsions were approaching. The convulsions continued with the same frequency, as during the previous night. Ordered wine, whey, milk punch, and beef tea, *pro re nata*; dressings to the head, the same as yesterday. The fungus cerebri protruded much more than the previous day. A simple enema was given and his bowels continued in a soluble state.

Saturday, November 1.—The convulsions still continued every three to five minutes, and were general; during these the head was drawn more to the left side than on the previous day. Pulse remained at 86; at eleven o'clock, A.M., the convulsions had entirely ceased; up to this time he has had from two hundred and fifty to three hundred convulsions; the compress and bandages were applied in the afternoon; everything appears favorable; he is somewhat sleepy, and his tongue is somewhat swollen, being badly bitten while in the convulsions.

Sunday, November 2.—Patient's general condition more favorable; no convulsions, fungus has not increased since previous day; pulse 68.

Monday, November 3.—The paralysis of left side, which has continued during the last few days, begins to subside, patient feels when the sole of his left foot is tickled; but has no power of motion.—This paralysis of the left side commenced with the convulsion; pulse still 68.

Wednesday, November 5.—Paralysis has entirely disappeared, and he has control of both left arm and leg.

Thursday, November 6.—Dr. Smith removed the fungus, applied nitrate of silver, and directed wound to be syringed with liquor calcis, and compresses, wet with same, to be continued; pulse 63. Professor A. Clark examined the portion of fungus removed, under the microscope, but no brain substance was found; the fungus consisting of fibrin and hæmatoidin.

Friday, November 7.—Pulse 72, everything favorable, patient anxious to get up and dress.

Saturday, November 8.—Dr. Smith touched fungus with nitrate of silver; dressings reapplied, compression continued.

Sunday, November 9.—Fungus markedly increased, in other respects his condition was favorable.

Monday, November 10.—Dr. Smith removed fungus, some arterial hæmorrhage, which was readily checked with nitrate of silver.

The following lotion was directed to be applied:—R acid. nitric. gttss. xx; aqua. 3 i.

The examination of the removed fungus showed that it was similar to the one first removed; none of the substance being brain and con-



sisting only of a granular mass, with a few bloodvessels and blood disks.

Tuesday, November 11.—Purulent discharge continues, and there is some sloughing of fungus. Lotion continued.

Wednesday, November 12.—A small portion of fungus was removed, which was followed by an obstinate hæmorrhage. This was checked by nitrate of silver and cold water lotions; patient seemed relieved by the hæmorrhage; there was some pus discharged; lotion and dressings continued.

Thursday, November 13.—Pulse 70; general condition good; washed wound with weak solution of chloride of soda. Very little of the fungus remaining; none beyond the lips of the wound; all had sloughed. Paralysis of the left arm came on.

Patient continued the same, with no incident of note till

November 26.—Paralysis of left arm still remains; no farther protrusions of fungus cerebri; lotions of nitric acid discontinued, and pulv. cupri sulph. used instead.

Wednesday, November 26.—Patient had a severe chill; no appetite; restless; general condition unfavorable; fungus began again to protrude.

Thursday, November 27.—Still worse; another chill; pulse 68; answers all questions rationally.

Friday, November 28.—Paralysis of the whole of left side; patient still had his senses sufficient to sign an order for money in bank, and to give some few business directions; no convulsions; pulse 68; fungus more prominent, with fœtid discharge. Friday night.—Restless; cold perspiration over whole body; tendency to coma; could be aroused with great difficulty.

Saturday, November 29.—Complete coma; could not swallow; discharge same as previous day, fœtid. At night, involuntary evacuations of bowels.

Sunday, November 30.—Patient died at three P.M., with all symptoms of abscess of brain.

No autopsy could be had, the case having passed into the hands of the coroner, from supposed carelessness of those having charge of the blast, in not giving notice. The coroner delivered the body to the friends, who would not consent to an autopsy.

*Remarks.*—The length of time which the patient survived such severe injuries, is, perhaps, the most interesting feature in the first case. The injury which the brain sustained by the mere isolation, without displacement, of a button of bone, from the base of the cranium, at the point indicated, was too slight to have given rise to any severe immediate symptoms. The complete comminution of the superior maxillæ was a much more serious complication, and one that would have doubtless led to a fatal issue.

In the second case, we have the unfavorable complication of a hernia cerebri. But two or three facts were observed in the progress of this disease worthy of notice.



The first is as to the nature of the tumor. One class of these growths so strikingly resembles the normal material of the brain, that they have hitherto been supposed to consist of the substance of that organ, protruded through the cranial opening, and hence the name *hernia cerebri*. The tumor in this instance was twice excised and submitted to microscopical examination. In neither instance was there found to be a trace of the normal constituents of the brain, although, on simple inspection, it closely resembled cerebral substance.

A second fact observed relates to treatment. Excision of the tumor, followed by firm pressure, was productive of no benefit. The tumor seemed, on the contrary, to spring up more rapidly after excision, while pressure, of a degree sufficient to restrain the protrusion, was not tolerated. The tumor was finally allowed to increase without restraint; it soon acquired a large size—and becoming strangulated at its base, sloughed completely off. The general symptoms now began to improve; the patient recovered in a considerable degree the use of his left side, and he wished to get up. Meantime, the surface of the wound improved, the cerebral pulsation was slight, and, for several days, there was no appearance of a return of the disease. Local applications had no apparent beneficial effect.

#### FRACTURE OF INFERIOR MAXILLA.

*Summary.*—Number of cases, 11; number of fractures, 13; united, 7; ununited, 5.

*Case 1.*—*Fracture of Shaft and Ramus; Gutta Percha Dressing—No Union at the end of 137 days.*—R. B., aged 45; native of Ireland; laborer; of somewhat intemperate habits, but good constitution; was admitted March 19. He had received his injuries by being thrown violently from a wagon, which came in contact with a railroad car in rapid motion. These consisted of a severe lacerated wound of the lower part of the back and nates, contusions upon various parts of the body, and a double fracture of the lower jaw. Both fractures were oblique, the right being through the body, just anterior to the insertion of the masseter muscle; the left being through the ramus.

Owing to the severity of his injuries, and the supervention of symptoms of prostration and delirium tremens, no dressings were applied to the jaw until April 1, the thirteenth day. A gutta percha splint was then adapted to the jaw, and plugs of the same material placed between the teeth. The decayed and irregular state of his teeth, however, prevented the adjustment of interdental splints, so as to serve any useful purpose.

On the 7th of April there was free arterial hæmorrhage, from the region of the fracture on the right side; about a pint of blood lost; the bleeding ceased spontaneously and never returned.

May 23.—The dressings were removed, but there was no union of the fractures, the central portion of the jaw moving freely. The patient's general condition was still unfavorable, and the dressings were re-applied, so as to retain the fragments as much as possible in

apposition. Discharged about the middle of August, the fractures being still ununited.

*Case 2.—Fracture at Symphysis; dressed with roller and cork between teeth—Cure, complete in thirty-seven days—No deformity.*—A. R., æt. 40; native of New York; laborer; of good constitution and temperate habits; was admitted September 24. The fracture was produced by a blow, the lesion occurring at the symphysis menti. The four-tailed bandage was employed, with pieces of cork between the teeth. Discharged, October 31, with firm union, and no deformity.

*Case 3.—Compound Comminuted Fracture from a Powder Blast—Removal of Fragments—Death on the eleventh day.*—A. K., æt. 35; native of Ireland; stone-mason; intemperate habits, but good constitution; was admitted November 16. The fracture was caused by a stone from a blast of rock, which struck him in the face. The lower jaw was so comminuted as to have lost its natural shape, the fragments feeling through the integuments like a collection of small irregular pieces of bone. He was so severely injured otherwise, as to require active supporting treatment until his death, which occurred on the eleventh day. Fragments of bone and teeth were removed, from time to time, as they loosened.

*Case 4.—Fracture near Angle, oblique—Barton's bandage—Union, perfect—Discharged on thirty-ninth day.*—M. R., æt. 54; native of Ireland; laborer; intemperate, but of good constitution; was admitted January 7. The fracture was on the left side, near the ramus, oblique, and occurred from a blow upon the underside of the jaw. No complication existed. It was dressed, January 19, with Barton's bandage, having a compress over the point of fracture. Discharged, February 15, with firm union and no deformity.

*Case 5.—Fracture through both Rami—No dressing applied—Union, perfect.*—J. G., æt. 45; native of Ireland; laborer; good constitution; was admitted May 5. The fracture was through the ramus of both sides, and was caused by a fall from a third story while ascending a ladder with a pail of water. There was no apparent displacement, and no dressings were applied. Several days after admission, the patient was attacked with pneumonia, from which he convalesced after a severe illness. Discharged, June 2, with perfect union of the fractures of the jaw.

*Case 6.—Fracture through Body—Barton's dressing—Imperfect Union on the seventeenth day.*—J. O'N., æt. 30; native of Ireland; laborer; good constitution; was admitted nine days after occurrence of fracture. The fracture was through the body of the jaw on the left side, and occurred from a direct blow upon the part. He was treated with Barton's bandage twelve days after admission. Discharged with imperfect union.

*Case 7.—Fracture through Ramus—Gibson's Dressing—Firm Union on twenty-ninth day.*—P. R., æt. 55, native of Ireland,

laborer, good constitution, was admitted two days after receipt of injury. The fracture was through the ramus of the left side, caused by a blow upon the opposite side of the jaw, two days before admission. Gibson's dressing was applied. Discharged twenty-nine days after admission; union firm; no deformity.

*Case 8.—Fracture through Shaft—Cause, a direct blow—Gutta-percha splint—Union, perfect in thirty-five days.*—P. D., æt. 35, native of Ireland, laborer, good constitution, admitted five days after occurrence of fracture. Fracture through the body on the left side, caused by a direct blow, five days before admission. The dressings consisted of an external splint made by moulding gutta percha to the jaw, and interdental splints of the same material. The dressings preserved the parts in accurate apposition for three weeks, when they were removed. They were reapplied, and again removed at the end of a fortnight, when union was found to be firm. The first molar tooth became loosened, and had to be removed. Discharged thirty-four days after admission, with firm union, and slight elevation of the posterior fragment.

*Case 9.—Fracture of Ramus—Union in twenty-three days.*—M. R., æt. 46, native of Maine, good constitution, was admitted one day after injury. The fracture was through the ramus of the right side, and was caused by a direct blow. The patient could close his jaws firmly; there was no displacement; and the fracture could be detected only by opening and closing the mouth. A simple roller dressing was applied, so as to maintain a fixed position of the lower jaw; no interdental splints were used. Discharged twenty-three days after admission, with firm union; no deformity.

*Case 10.—Fracture at Symphysis—Non-Union at end of four months.*—P. C., æt. 36, painter, native of Ireland, good constitution, was admitted two months after the occurrence of the fracture. The fracture was at the symphysis, and was caused by a blow. There was a fistulous opening, through which the probe could be passed from without directly between the fragments, so as to appear in the mouth.

The fracture had been treated on Blackwell's Island, from which the patient was discharged for disorderly conduct, six weeks after its occurrence. There was no union on admission to Bellevue Hospital. The gutta percha dressings were applied, but the patient removed them frequently. Discharged nineteen days after admission, without union.

*Case 11.—Fracture of Shaft; Gutta Percha Splint; Results Uncertain.*—J. L., æt. 19, native of Ireland, sailor, intemperate, syphilitic; admitted one day after occurrence of fracture.

The point of fracture was oblique, through the shaft of the left side, near the angle, caused by a direct blow. The gutta percha splint, external and internal, was applied. The fragments were maintained in perfect apposition until the fifth day, when the patient took his discharge. Results of treatment uncertain.



TABLE OF ELEVEN CASES OF FRACTURE OF THE INFERIOR MAXILLA.

| NO. SEX. AGE. | CAUSE.                  | POINT OF FRACTURE.                     | DRESSINGS.                            | TREATED.         | UNION. |
|---------------|-------------------------|----------------------------------------|---------------------------------------|------------------|--------|
| 1. M. 45.     | Thrown from carriage .. | Shaft of right and ramus of left side. | Gutta percha.                         | 137 d.           | None.  |
| 2. M. 40.     | Blow .....              | Symphysis.                             | Four-tailed bandage, cork bet. teeth. | 37 d.            | Firm.  |
| 3. M. 35.     | Blast of rock           | Entire body of jaw comminuted.         | None.                                 | Death on 11th d. | None.  |
| 4. M. 54.     | Blow under the jaw ...  | Shaft near angle.                      | Barton's.                             | 27 d.            | Firm.  |
| 5. M. 45.     | Fall from a ladder....  | Ramus of both sides.                   | None.                                 | 29 d.            | Firm.  |
| 6. M. 30.     | Direct blow             | Shaft of left side.                    | Barton's.                             | 12 d.            | Firm.  |
| 7. M. 55.     | Indirect blow           | Ramus of left side.                    | Gibson's.                             | —                | Firm.  |
| 8. M. 35.     | Direct blow             | Shaft of left side.                    | Gutta percha.                         | 34 d.            | Firm.  |
| 9. M. 46.     | Direct blow             | Ramus of right side.                   | Barton's.                             | 23 d.            | Firm.  |
| 10. M. 36.    | Direct blow             | Symphysis.                             | Gutta percha.                         | 19 d.            | None.  |
| 11. M. 19.    | Direct blow             | Shaft of left side.                    | Gutta percha.                         | 5 d.             | None.  |

**REMARKS.**—*Sex.*—In this collection of cases the patients were all males. The immunity of females from this accident is obviously due to their employment, which exempts them from the exciting cause, viz., direct injuries.

*Age.*—The age at which fracture of the lower jaw is most frequent, is the middle period of life, or that during which the individual is most frequently exposed to severe injuries. Age, like sex, has no other exemption from this accident than what appertains to the withdrawal from its exciting causes.

*Cause.*—In every case but one, the blow or injury was direct. In Case 7, the blow was received upon the opposite side of the jaw from that where the fracture occurred.

*Point of Fracture.*—In about one half of the cases, the body of the jaw was the seat of fracture. That portion of the shaft most frequently fractured was about the insertion of the anterior border of the masseter muscles. In one case the body of the jaw was perfectly comminuted, and in a second a fracture of the ramus occurred upon the opposite side. Five of the thirteen fractures were through the ramus, and two at the symphysis.

*Dressings.*—The particular form of dressing employed depended upon the peculiarity of each individual case. Where the fracture occurred through the ramus, the dressings were usually a simple four-tailed bandage, tightly applied, without interdental splints. The patient was allowed to take semi-solid food, but movements of the jaw were restrained as much as possible. Firm union never failed to take place in these cases at an early day.

When the fracture existed at the angle, through the shaft, or at the symphysis of the jaw, the dressings were such as seemed best adapted to keep the fragments in constant apposition. Of those employed the gutta percha, both internal and external, gave the most satisfactory



results. The preparation of this dressing is simple. The external splint is prepared by dipping a sheet of gutta percha in hot water, when it can be readily moulded into the shape required. The form of external splints best adapted to secure the apposition of the fragments was that which embraced the jaw beneath and latterly, with a strip passing around in front, thus enclosing the prominence of the chin. The gutta percha, when treated with hot water, can be readily moulded with the fingers so as to precisely fit the parts as described. When about to be applied, the splint should be lined with a layer of lint or cloth, to avoid the irritation of the skin which this substance might induce. The splint is then adjusted to the jaw and secured by a bandage applied in the usual manner.

The gutta percha, moulded into proper shape, was also introduced between the teeth to serve as interdental splints, and nothing can surpass it in efficiency. Prof. Hamilton, of Buffalo, who, we believe, was the first to employ gutta percha for such purposes, gives the following directions for its preparation :

“Dip a couple of pieces of the gum, of a proper size, into boiling water, and when they are sufficiently softened mould them into wedge-shaped blocks, and, having wrapped each block with a piece of cotton cloth, carry them to their appropriate places between the back teeth. Immediately press up each horizontal ramus of the jaw until the mouth is sufficiently closed, and the line of the inferior margin is straight. In this position retain the fragments a few minutes, until the gum is sufficiently hardened. Meantime it will be practicable, generally, to introduce the fingers into the mouth, and to press the gutta percha latterly on each side towards the teeth, and thus to make its position more secure. When it is sufficiently hardened, remove the splints for the purpose of determining more precisely that they are properly shaped and fitted. The superiority of this splint is now at once perceived. If properly made, it is smooth upon its surface, and not, therefore, so liable to irritate the mouth as wood or cork, and it is so moulded to the teeth that it will never become displaced.”\*

*Results.*—The length of time required in the treatment of those fractures depended upon the nature of the fracture and the condition of the patient. Where there was no complication, and the constitution of the patient was good, the union was firm in an average of 27 days. Fracture through the ramus, owing to the slight mobility of the fragments and their more perfect apposition, afforded the best results as to the length of time required for cure. This variety gives a less number of days of treatment, with no instances of non-union. Fracture at the symphysis proved to be slightly less favorable than through the ramus, although the parts are easily maintained in apposition. The cause of non-union in Case 10 was due entirely to the misconduct of the patient, who removed his dressings whenever he ate. He was discharged from the hospital for disorderly conduct.

The number of cases of non-union is unusually large. The causes of non-union were all referable to the condition of the patient. In

\* *Trans. Am. Med. Assoc.*, Vol. VIII.

Case 1, the patient was suffering from severe injuries, which nearly proved fatal. He, however, slowly convalesced; and when sufficiently recovered to bear the application of dressings, it was found impossible to adjust them so as to preserve the fragments in apposition. This was owing to decayed teeth, and the fracture being through the shaft upon both sides and nearly opposite, left the middle portion of the jaw unsupported and subject to extensive motion. In Case 3, the jaw was so thoroughly broken in pieces, that, had the patient survived his other injuries, doubtless the entire maxilla would have exfoliated.

It appears from this collection of cases that, although union occurs very promptly in fractures of the inferior maxilla, when circumstances are favorable to a quiet apposition of the fragments, non-union is not unfrequently the result of the most persevering efforts to effect a cure. This will especially prove true when the constitution is at fault.

The amount of deformity in the cases of union was so slight as not to be worthy of note.

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#### BROOKLYN CITY HOSPITAL.

For the following account of the Brooklyn City Hospital we are mainly indebted to the Annual Report of the institution for 1854. In tracing the rise and early history of this institution, the remark that, "coming events cast their shadows before," seems to have been fully verified inasmuch as there had been an attempt at a city hospital some year or two previous which failed for want of support, some slight assistance which it had received from the city being stopped in consequence of its being not allowed by the City Charter. But the germ of a more successful effort was soon to be planted, and in the following extract from the minutes of the Brooklyn Association for Improving the Condition of the Poor, Dec. 11, 1844, we recognize that germ:—"On motion a committee was appointed consisting of Messrs. Nichols, C. P. Smith and Greenwood, to take the necessary preliminary steps to convene a public meeting on the subject of establishing a City Hospital." This meeting was held on the 17th February, 1845, when measures were determined upon to secure an act of incorporation, which was accomplished on the 8th May, 1845. On the 3rd June, the trustees named in that act accepted it, and made various appeals through churches and to individuals which were but feebly responded to. The occurrences are of too recent date to recapitulate the vicissitudes of the young institution; suffice it to say that, owing to the indefatigable nursing and unquenchable hopes of its originators, buoyed up by the benevolence of the late Mr. Augustus Graham, the workings of whose heart for its good, even at that early period, began to manifest themselves by a donation of five thousand five hundred dollars, a house was purchased and fitted up for the reception of patients in November, 1846. At this old building in Hudson Avenue an amount of good was accomplished to which the trustees must ever look back with pleasure. For two years the hospital here struggled with but doubtful prospects, when the benevolent spirit of Mr. A.

Graham again manifested itself. He announced on the 4th of July, 1848, his splendid donation of twenty-five thousand five hundred dollars, having the condition attached to it, that the citizens of Brooklyn should contribute a similar sum. This gave a fresh impetus to appeals to the public, but, alas, there was no response. Two years more elapsed in which the workings of the hospital convinced the trustees the more of the necessity for its existence and enlarged means of doing good. The new City Charter permitting an annual appropriation of two thousand dollars, gave the trustees additional hopes of success, and they determined to make another energetic effort, themselves setting the example, and at the monthly meeting of the 21st of October, 1848, a paper was handed round which footed up some thirteen thousand dollars. To this subscription Mr. A. Graham again contributed two thousand dollars. This was sent before the public, but exclusive of the absent members of the board of trustees, came back with the addition of only about four thousand. With this it was determined to go on and build by piecemeal; and Mr. A. Graham having very nobly withdrawn his conditions, plans and specifications were agreed upon, and the venerable benefactor himself removed the first sod from old Fort Greene, towards commencing the centre of the building. Singular that *he* was now using the spade in the first step of this noble enterprise, who, some thirty-seven years before, used it in throwing up the ramparts, the remains of which are yet within the hospital grounds.

On the 11th of June, 1851, the corner stone was laid with appropriate ceremonies. On the 23th of April, 1852, the centre was completed and thrown open for the inspection of the public. On the 29th it was occupied by patients, and from that time, under the auspices of a Providence that has seemed to move the hearts of the general, State, and City Governments to assist the trustees, at the same time infusing in them energy to assist themselves, they have been enabled, from time to time, to add the wings, and are now rejoicing in the completion of an entire building, it is hoped, capable of accomplishing every desirable object.

Mr. Augustus Graham has been so frequently mentioned in the course of this review that it may be well to record in a connected view, his different donations and bequests. They are as follows:—

|                                     |          |
|-------------------------------------|----------|
| His first of . . . . .              | \$ 5,500 |
| July 4, 1848, . . . . .             | 25,500   |
| October 21, 1850, . . . . .         | 2,000    |
| For instruments, . . . . .          | 500      |
| For furniture, (by will,) . . . . . | 5,000    |

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In all amounting to the very handsome sum of \$38,500

He has gone to his rest and left a name that must endure to far distant times.

The building is a very handsome one, pleasantly situated on Fort Greene, and presents a front of two hundred feet facing due west on Raymond Street. It consists of a centre building four stories high,

fifty-two feet wide, and fifty-two feet deep, and with an extension back thirty feet; and two wings—a north and south wing—each seventy-four feet long, and fifty-six feet deep, and three stories high. About one thousand patients are annually treated in this institution. The following are the medical officers of this institution:—

## PHYSICIANS.

JAMES CRANE, M.D.  
D. S. LANDON, M.D.  
H. S. SMITH, M.D.  
J. C. HUTCHISON, M.D.

## SURGEONS.

DE WITT C. ENOS, M.D.  
D. E. TUSSAM, M.D.  
J. M. MENOR, M.D.

## RESIDENT PHYSICIAN.

HENRY W. HOLMES.

## RESIDENT SURGEON.

WILLIAM H. BABCOCK.

*Report of Cases occurring in the Brooklyn City Hospital.* By DE WITT C. ENOS, M.D., Attending Surgeon.

*Case 1.—Fracture of Skull—Depression—No Symptoms of Compression—Trephined—Recovery.*—(Reported from the Notes of WM. H. BABCOCK, House Surgeon. By JAMES FARLY.)—Henry Wharton, æt. 32; born in England; been in this country five years; married; engineer. Was admitted to the Brooklyn City Hospital on the evening of Saturday, August 9th. He had been injured at the explosion of the steam-boiler at Wilder's safe factory, by which the building was prostrated, burying the patient and others in the ruins. He had lacerated and contused wounds on various parts of the body and extremities, also a wound in the forehead to the left of the median line and an inch and a-half above the orbital ridge. The wound had been brought together by interrupted sutures before admission. The stitches were removed that the wound might be examined, and cleansed, if necessary. The cranium was found fractured, and a portion of it, about an inch in length by three-quarters in width, was depressed; or rather, one end of it was the *thickness* of the skull, the other was slightly elevated above it.

There were no symptoms of *concussion* or *compression*. He was entirely calm and conscious; pulse and respiration normal, and the pupils obedient to light. Nevertheless, there being an external scalp wound, and an *irregularly depressed* fracture, it was deemed best to operate and not wait for inflammatory action to demand it; a contingency almost certain to arise from such a condition of things. As the depressed bone could not be moved by the elevator, the wound was enlarged into the T form, the trephine applied, a portion of sound bone removed, and then the fractured part taken away. The internal table was broken to a much larger extent,—and one piece of it was taken out, which ran back nearly an inch—leaving the rough diploe next the dura mater. This, however, and the other rough points were smoothed off as much as possible with the rough side of the elevator. There was slight hæmorrhage from a vessel in the dura mater, which the fractured bone had injured. A sponge, wet in ice-



water, was therefore left in the wound. The patient was entirely conscious during the operation.

August 10, half-past ten A.M.—Hæmorrhage not entirely stopped. Had an anodyne suppository last night; slept some; water drawn off with catheter; bowels not moved; has slight headache, otherwise feels very comfortable; wound drawn together by adhesive strips.

August 11.—Had rested pretty well; bowels moved by an enema; urinated several times; feels very weak; slight headache; tongue, slightly coated—white; pulse and respiration, normal; appetite, poor.

August 12.—Had violent headache last night; slight erysipelatous flush about the forehead and face, with swelling. Ordered—tart. emetic, one-eighth of a grain every two hours; toast water.

August 13.—Much better; had a comfortable night; constitutional disturbance disappearing; some headache; water-dressing applied.

August 14.—Does not sleep well; complains that the bed is hard; he had always slept on feathers; a feather bed ordered; wound granulating, and it suppurates freely; head kept upon the side to promote its exit.

The patient continued to improve, feeling well, and he was discharged, at his own request, before the wound was entirely cicatrized.

*Case 2.—Fracture of Skull—Depression—No Symptoms of Compression—Trepined seventy-five hours after—Death.*—(Reported by Dr. BUTLER, House Surgeon.)—John Dooner, æt. 33; born in Ireland; laborer; was admitted September 24, with laceration of the scalp and fracture of os frontis, extending on either side of the median line. It was caused by the fall of a heavy piece of timber. The fracture was two and a quarter inches horizontally, by two inches longitudinally. This was pretty uniformly depressed, about the thickness of the skull. The lower margin of the fracture was nearly an inch above the supra orbital ridge. At first there were symptoms of concussion; pulse frequent and small; nausea; vomiting; pupil contracted; soon became rational and calm in mind; no symptoms of compression. His scalp was shaved, wound cleansed, and lint and water applied. Dr. Enos saw him two hours after admission, and six after the injury; surface warm; pupils obedient to light; pulse 74; respiration 18; no nausea; mind, clear.

The location of the fracture, the uniformity of its depression, its great extent—whose removal would lay bare so much of the brain—the absence of the symptoms of compression, and of all cerebral disturbance, made it seem best to him not to hazard an operation for the present, but to wait and see if subsequent developments should demand it. Accordingly, quietness was enjoined, and an anodyne suppository to be used if necessary.

September 25.—Had a good night; pulse, the same; tongue, coated; breath, offensive; mind, clear; urine, free and normal. At eleven A.M., Dr. Minor saw the patient with Dr. Enos. It was deemed best not to operate. Ordered—ol. ricini,  $\mathfrak{zss}$ , rejected; enema of a pint of water, tepid, at one P.M., no effect. Three P.M.—Patient seems dull; sleeps constantly; pulse, 64. Ordered—ol. ricini, lac. assafoetida,  $\mathfrak{zij}$ ., and spts. terebinth,  $\mathfrak{zss}$ ., to be injected into the

bowel, and to be followed in an hour with a pint of tepid water. This caused a free discharge of hard fæces; patient seems easier.

September 26.—Rested quite well during the night; says he feels well; pulse, 64. Light nourishment and ice allowed.

September 27.—Pulse, the same; more drowsy; takes nourishment and retains it. One P.M.—More insensible; no stertorous breathing; had another enema like the last, except the turpentine, no effect. Seven P.M.—Still more insensible; slight twitching of some of the facial muscles. Nine P.M.—Almost impossible to arouse him. After consultation, an operation was resolved on, and by means of the trephine and elevator, five pieces of bone were removed, varying from half an inch to an inch in width, and about two inches in length; dura mater not injured; a large piece of the skull, extending down into right frontal sinus, was movable, but not being depressed, it was not disturbed; patient had frequent slight convulsions during the operation; pulse continued 64; wound lightly brought together, and water-dressing applied.

September 28.—Had spasms about every half hour during the night; grow more frequent, with stertorous breathing; pulse, 58; takes no nourishment.

September 29.—He died at nine A.M.

*Case 3.—Compound Fracture of Skull—Depression—No Symptoms of Compression—Trephined—Death.*—J. Johnson, aged 55; born in Ireland; been in this country six years; married; laborer; intemperate; was admitted on Saturday the 23rd of August, at half-past six, P.M., with injuries, received about half an hour before, from being kicked by a horse. Compound depressed fracture of frontal bone; wound in integument, one inch and a half long; pulse fair; surface pale and cool; intellect slightly impaired; a little restless; arterial hæmorrhage from wound; no symptoms of compression at the time of his admission. Dr. Enos saw the patient at eight P.M., when he trephined, and removed the depressed portion, in several fragments, the area of which amounted to two or three square inches.

August 24.—Slept a little last night; no discharge from wound; pulse fair; intellect little confused; pupil sensible.

August 25.—Several discharges from wound in large quantities; pupil contracted, but sensible; pulse, 80; respiration, 25 to 30, and deep, continued so during day; not conscious; will not swallow.

August 26.—Condition about the same as yesterday; continued so up to nine o'clock P.M., when he died.

*Remarks.*—It is a mooted question among surgeons, whether the trephine should be used at once in cases of fracture of the skull with depression and no *symptoms* of compression, or the patient left to the resources of nature and to a secondary operation, should subsequent developments imperatively demand it? The impression left on the mind, from carefully watching the above cases, and others that have come under our observation, incline us to the opinion that, where the depression is decidedly well marked, the patient's chances of life and health are augmented by an early operation.

*Case 4.—Scalp wound—Concussion—Compound and Comminuted Fracture of Radius and Ulna—Recovery.*—Henry Castard, aged 32 years; born in Prussia; been in this country three years; married. Was injured at same time and place as the patient in Case 1, admitted same evening, suffering from a compound comminuted fracture of the radius and ulna of left extremities, slight wound in scalp, and symptoms of concussion; the fore-arm was greatly swelled, and the bones were in several pieces; placed it on an angular splint, bandaged it, and ordered it to be kept wet with ice-water.

August 10.—Symptoms of concussion have disappeared; feels comfortable; had half a grain of pulv. opii. last night; slept a little; bowels moved; and has passed urine; swelling greatly diminished.

August 15.—Swelling gone down entirely; put up in two parallel splints and sling.

September 8.—Removed splints; found perfect union; commenced passive motion.

September 20.—Can move his arm very well; rotary motion perfect; has use of his hand and fingers, and can grip quite hard.

*Case 5.—Compound fracture of the Leg—Dislocation of the Ankle Joint, with Fracture of Internal Maleolus—Extensive Scalp Wound—No Symptoms of Concussion—Recovery.*—Patrick Doligan, aged 45; born in Ireland; been in this country twenty years; married; coal-carman; admitted on the 8th of August, suffering from a compound comminuted complicated fracture of the right leg, and scalp wound, commencing at the top of the head, and extending to the front portion of right ear. Was carting a load of coal, and, seeing a friend on the sidewalk with whom he wished to speak, he attempted to get down while the cart was in motion, in doing so, his foot caught in the check-chain, tripping and throwing him on the ground, and the wheel passed over his leg, and struck his head, making the wound above described. There was fracture of both bones of the leg about three inches above the ankle joint, and compound on the inner side; the internal maleolus was broken off, and the foot dislocated outward; reduced luxation; put a splint on the outer side of leg, secured it with a roller and many-tailed bandage, and placed the whole over a double inclined plane, and ordered it to be kept wet with ice-water; there were no symptoms of concussion; scalp wound brought together by adhesive strips.

August 9.—Upper portion of wound of scalp healed by first intention; slept pretty well during the night, but would start and jerk occasionally; complains of a throbbing pain in leg this morning; has not swelled any; wound dressed with cold water. Ordered—pulv. Dovers, grs. x., at night.

August 10.—Slept well, but started quite often; leg looks well this morning. In order to keep the parts as still as possible, the limb was put in a swing apparatus attached to his bed; wound in scalp all healed.

August 15.—Progressing favorably; wound in leg granulating; does not pain him any.



September 29.—Has gone on favorably ; to-day has limb bandaged, and walks about the ward with the help of crutches.

*Case 6.—Compound Complicated Dislocation of the Elbow-Joint—Recovery.*—Terance O'Brien, æt. 16 ; born in Ireland ; been in this country four years ; was admitted on the night of the 13th of August ; was engaged in Prentiss' hat factory, and in attempting to pass a hand over a pulley, his right arm was caught, and he thrown over the shaft, producing a compound dislocation at the elbow-joint ; the humerus divested of all ligamentous and muscular attachments, protruded two inches through a wound in front. The inner condyle was knocked off, and there was a fracture of coronoid process of the ulna. Dr. Enos reduced the dislocation, put the arm on an angular splint, and ordered cold water dressing ; pulse felt at the wrist.

August 14.—Did not sleep well ; complained of pain in the joint ; slight swelling ; continue water dressing.

August 15.—Slept pretty well. Ordered—poultice to wound this morning ; swelling slightly increased ; does not complain of pain.

August 20.—Suppurates profusely ; has made a new opening at the back of the joint.

August 25.—Both openings granulating ; continue poultices.

September 29.—Wounds granulating nicely ; small discharge of pus ; will, without doubt, save the limb, and perhaps with some motion.

*Case 7.—Dislocation of the Foot at the Scapho-Cuneiform and Calcaneo Cuboidean Articulations—Reduction—Recovery.*—Catharine Steers, æt. 21 ; born in England ; single ; admitted August 4th. The evening before, as she was coming off the ferry-boat, her right foot was caught between the boat and bridge. She said the boat pressed against her heel and toes against the bridge. The foot was doubled, and the metatarsal and cuneiform bones were forced outward on the scaphoid, carrying the cuboid before them. The internal cuneiform bone rested in the place of the middle on the os scaphoides. This latter bone remained prominent and in situ.

There was a great deal of pain and swelling at the time of her admission, and considerable deformity, although she said "it had been set twice by two different doctors."

The swelling and pain were so great, that no accurate diagnosis could at first be made. An evaporating lotion was therefore applied, and the foot kept elevated. A saline cathartic administered.

In a week the tumefaction had very much subsided, and the above described dislocation was clearly made out. Reduction was thus effected :—The tibia was placed perpendicularly, and one assistant held to it just above the ankle and made counter extension, while another grasped the metatarsus, and made strong extension. Dr. Enos, at the same time, with his fingers on the inner side of the foot resting against the prominent scaphoid, forced, with his thumbs applied to the cuboid bone, the whole dislocated part inward. It returned to its proper position with an audible snap. The foot slowly recovered, and in seven weeks she left the hospital.



ART. VII.—*Abstract of the Proceedings of the Medical Societies of New York.*

## NEW YORK ACADEMY OF MEDICINE.

REGULAR MEETING, NOV. 5, 1856, DR. WILLARD PARKER, *President.*

## COMPARATIVE ANATOMY OF HUMAN CRANIA.

DR. M'ELHERAN, Member of the Royal College of Surgeons, Edinburgh, said he would have sought the high privilege of addressing them two years ago, but he had found the field of his investigations still widening, and he was anxious to come before the Academy with an essay as complete as possible. From our works on Archæology, our museums, and from dentists, hatters, etc., he had reaped a rich harvest of facts. This world's-fair of human specimens, where the sons of men stand side by side, is the greatest school for the student of ethnology. Whatever credit his work might attain, is therefore due to the free spirit and kindly co-operation of the members of the profession in his adopted country.

The Doctor maintained that ethnology has hitherto been only an empiricism, because the transcendental doctrines of development, such as they are, have been misapplied or entirely disregarded by ethnologists. He contends that nature has repeatedly changed her mode of operation, and that she converged her forms in approaching man, who presents the most distinct evidence of antagonisms of unity and variety, and of a versatile vital principle, the *animus* which is not to be confounded with the *anima*, or soul.

He believed that the true doctrine of development, which he briefly elucidated, and the radiating degeneracy of the human family from the Celtic centre—supported the dogma of original unity. But races have been stereotyped, and evidently as permanently distinct as if they had been created separately. Oppressed Celtic types have repeatedly regained their true position, physically and mentally, but no inferior Gothic or other carnivorous race ever rises above a certain level; for in them the vital principle itself seems impaired. They are *stereotyped*.

The Doctor demonstrated that the brain and skull of the herbivora is superior to those of the carnivora, and that, therefore, we must have a new classification of animals.

He divides men, according to natural history, into *omnivora*, *herbivora*, *carnivora*. These are the types, found under various forms, *infantile*, *athletic*, *intellectual*, in the several continents of the world. We find ethnology a chaos of contradictions, because authors have not discriminated between forms arrested in development, accidental *types*, and permanent *stereotypes*. The common facts of natural history, which elucidate these phenomena, have been disregarded. Transcendental anatomy explains the varieties of forms; that is, degrees of development. Man is naturally omnivorous, but he degenerates and diverges into the other stripes. This fact supplies a philosophic basis for ethnology, including phrenology and physiognomy. The oval-headed, fine-limbed, *beau ideal* of the Celtic nations is the central type

and perfect form, contrasting with the Goths, Kalmucks, and other square-headed carnivora, and with true Negroes, Hindoos, and other narrow-headed herbivora. The unmixed, carnivorous Anglo-Saxons, have crania like the red savages, being generally broad, short, and distorted. And such is the common characteristic of the Gotho-German at this day. The average white American head is a regular long oval, like the Irish, Welsh, and Highland Scots. The Aborigines of the Old World were and are degenerate in proportion to their distance from the Celtic Mediterranean, degradation being most rapid southward into Africa and northward into Europe and Asia. Degeneracy is more gradual eastward.

The great trunk of the Celtic or central type, stretches through India, where it is modified. In China it is enfeebled and stereotyped. It terminates in Central America, which was the high central realm of the New World, as Celtica was of the old. This radiating degeneracy of men is like a process of chrysalization, the centre is most perfect—the superficies amorphous. The outer rind of the tree of life is most *suborganized*. These observations apply to races in their *aboriginal* nativities. The Anglo-Saxons, for example, still retain the evidences of their descent from the outer rind of humanity in north Europe.

In 1850–51, he made statistics of complexion, etc., of the inhabitants of Great Britain. He was the first to analyze that conglomeration of races, and to demonstrate that the Celtic type of Shakespeare and Wellington is dominant. His published address to the British Association, and his memorable controversy with the *Times*, in October, 1852, had extinguished Anglo-Saxonism in Britain, but the false theory still prevails in America. His friend and teacher, Dr. Knox, of Edinburgh, although merely theorizing, had inoculated our whole scientific and public press with Anglo-Mania. He (Mr. M'Elheran) had spent years of travel, and study investigating this special subject. He made and compared collections of portraits of the Celtic and Saxon races—specimens of which he now exhibited. By a combination of anatomical and artistic skill he had thus been enabled to enlighten dubious history. Beginning with living facts, he had traced the Celtic type back through Italy, Greece, Asia Minor, and Egypt, in illustration of their monuments, collections of crania, portraits, antique statuary, coins, etc., particularly in the new gigantic work, the *Tresor de Numismatique*. While even the latest writers, Nott, Davis, etc., still erroneously dogmatize over a few crania, he had broken up new fields of inquiry, in the reports of hatters, dentists, hair-dealers, etc., and produced aggregate millions of facts in proof of our Celtic origin.

The history of emigration and the peculiarity of our language, so different from the Saxon dialects of East and North England, prove that our ancestors came from the Celtic South and West of England, and the other persecuted Celtic parts of the three kingdoms—not to mention Celtic Spain, Celtic France, and Celtic Belgium.

The Celto-Germans from the borders of the Rhine, probably outnumbered the Gothic immigrants from North Europe, whose type has been submerged in the general Celtic tide. The true American type is therefore not a hybrid Anglo-Saxon, but a pure bred Celtic race;

as their language, their history, their physique, and impulsive, versatile genius testify.

This paper which fixed the attention of the Academy during two hours, was very profusely illustrated with cranial forms, and portraits of the Celtic and Gothic races. By merely changing the head-dresses and style of wearing the hair, the lecturer demonstrated that the physiognomy, as well as the phrenology and lathy figure of the French and Gaelic peasantry is exactly and unquestionably the same as the typical Americans, such as Washington, Jackson, Taylor, Clay, Webster, etc. And that the Anglo-Saxon is like the red Indian and other carnivorous savages.

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SOCIETY OF STATISTICAL MEDICINE.

REGULAR MEETING, Sept. 10th, 1856. Dr. J. W. CORSON, V.P.,  
in the Chair.

(Reported by E. H. JANES, Secretary.)

*Cases of Tetanus.*—Reported by J. G. SEWALL, M.D., Physician to the Northwestern Dispensary.

*Case 1.*—*Tetanus (idiopathic).*—Thomas McAndrew; native of New York; of Irish parents; aged 10 years. When taken ill, resided at 122 Perry street, in the basement. Owing to the unkind treatment of his step-mother, he was removed to a shanty near 9th avenue. He was often forced to sleep in wet clothes, and turned into the streets at night to find shelter where he could. About Sunday, September 7th, was siezed with what seemed a bad cold; had sore tongue and throat.

September 9.—Tetanic symptoms set in, the muscles of the head and neck first becoming rigid; afterwards those of the shoulders, trunk, and lower extremities. Through the whole course of the disease, the upper extremities were but slightly affected.

Sunday evening, September 14.—First tetanic spasm. Tuesday, 16, had two. 18th, one; and so on every day one or more.

September 16.—Was first seen by physician. Up to this time had received no treatment save a blister applied to throat within two or three days of the attack. At first it was difficult to decide whether the blistered surface or the disease occasioned the most suffering. General condition was good; pulse 80 to 90, strong; skin natural; is devoid of pain; articulation intelligible though imperfect; muscles of head, neck, and trunk, rigid; head thrown back; bowels constipated; swallows with difficulty; throat still slightly inflamed, filled with mucus, giving a rattling sound to respiration.

An ounce and a half of castor oil was ordered, with dressing for blister, and mild liquid diet.

September 15.—Condition the same; bowels freely opened. Ordered tr. assafœt. ʒi. every three hours, with liniment containing chloroform to spine.

September 20.—The same. Takes beef-tea and broths. Continue same medical treatment.

September 21.—Consultation was held. General condition the same;



pulse 88; skin cool; has had several severe paroxysms, with marked opisthotonos; continue assafoet. and apply ice to whole course of spine. This was tried for one day without marked effect.

September 22.—An enema of oil of turpentine and castor oil, to relieve constipation. Continue other treatment.

September 23.—Arms somewhat rigid; jaws less movable; surface cool; pulse 90; strength slightly diminished. At this time the violence of the paroxysms were much abated, being limited subsequently to sudden twitchings of the body, brought on by movements or attempts at swallowing, or even unexpected changes in position, or remarks of attendants; occasionally marked by considerable energy, yet always without pain.

September 27.—Pulse 96, intermittent; bowels freely opened. Omit assafoet. to take chloroform, fifteen drops every four hours. Considerable mucus rattles through lungs.

September 28.—Slept well; has had no spasms; did not get his medicine; appears and reports better.

September 29.—Pulse 99; three spasms reported since yesterday P.M.; little sleep; no pain, although constant expression of anguish; tongue coated with thick yellowish fur, cannot be protruded; moves limbs freely; muscles of neck and abdomen rigid; swallows freely. Beef tea and punch.

September 30.—Pulse 84; slept well; did not get chloroform till to day; takes two quarts milk per diem by report.

October 4.—Chloroform discontinued, and tr. cannabis indica, twenty drops three times a day, ordered. Pulse 96; has had three or four dejections after oil; spasms reported occasionally in night; appetite good; improves rapidly.

October 6.—Pulse 84; sleeps well after medicine, which he now takes but twice a day. Yesterday at one o'clock had a slight spasm with protrusion of tongue; perspires freely; gets out of bed now and then.

October 13.—Pulse 92; has improved in all points. All medicine has been discontinued for a few days past, and may now be altogether laid aside. Appetite is strong; muscles much less rigid; sleeps well and reports very favorably generally.

October 22.—Has been up and dressed for a few days past; walks about the yard barefoot, and without coat or hat, by holding on to the fences; muscles of neck and abdomen very much relaxed; bowels regular; appetite strong; sleeps well.

November 1.—Cannot be kept in the house; moves about rather stiffly, walking on his toes in part; says he cannot run, yet can climb about with ease. Discharged well.

Case 2.—*Tetanus (traumatic)*.—Felix McGill; æt. 35; Ireland. First seen, Saturday, October 4.—Eighteen days previously fell with a scaffold six or eight feet upon a pile of stones, sustaining an incised wound of the chin and of forehead, the edges of both of which were united by sutures. Both now appear to have kindly healed. Was well and about till yesterday, when he experienced a sense of constriction about fauces, with a stiffness of the lower jaw, and an inability to protrude



tongue, with a fear that if he did so he might bite it off. Accompanying these symptoms was a severe pain between shoulders. Has had several paroxysms, when mouth was drawn to one side and neck very stiff. These attacks resemble, in part, epilepsy, the patient lying on the floor; foaming at the mouth; great rigidity of muscles of neck and face, with strong facial contortions and a drawing of the facial muscles to the left side, the right appearing palsied. One of these lasted ten minutes without loss of consciousness. Tongue partially protruded affected the left side, the right commissure of mouth being shut while the left was raised and in motion. This condition was permanent; no pain in spine; sight and hearing both equally good on either side; mouth cannot be opened above one quarter of an inch; pulse 60, soft and natural; face flushed with an anxious expression. Can sit up or walk, though with difficulty.

Blister between shoulders. Cathartic of oil, also tr. cannabis indica, gtt. xx. every fourth hour.

October 5.—Much the same; sleeps after tr.; has had no paroxysms; oil operated.

October 6.—Was seen by two or three doctors, who used opiate enemata. While one was being administered in evening he suddenly died.

*Case 3.—Tetanus (traumatic).—*John McG., æt. 9½.

July 16.—Sustained a slight wound of left foot, between second and third toes, from a rusty nail. Went to school in two or three days after, having suffered no inconvenience beyond a trifling lameness.

Tuesday, August 1.—Complained of soreness of throat, which attracted no attention till Thursday the 3rd, when his mother walked with him to the dispensary, to be treated for it. The physician in attendance noticed, on inspection, an inflammatory blush about the fauces, with some tumefaction, and ordered a stimulating poultice, giving internally spirits mindererus. The boy walked home, and was about the house the rest of the day. Next day, by report, had a high fever, with increase of stiffness and soreness of throat.

August 5.—Found him in bed, tongue hot and dry, countenance anxious, pulse about 90. Complains only of throat, on seeking to examine the tongue, found patient unable to open mouth more than one-fourth inch, through which space its tip was protruded. Thinking the stiffness of the jaw arose from the supposed quinsy, I gently endeavored to depress it, preparatory to the introduction of an instrument, for the inspection of the fauces, when the boy, for the first time, was seized with tetanic convulsions. In lifting him from the bed, the anterior and posterior muscles of the trunk and lower extremities, so counter-balanced each other, that he preserved the stiffness and straightness of a board. Great dyspnœa ensued for a few moments, and the countenance assumed a livid hue, probably from spasm of the glottis. Consciousness was preserved during the convulsions, the boy asking in their midst, that his tongue, caught between his teeth, might be liberated, he being unable to do so for himself. In a few minutes he was returned to bed, the tetanic rigidity continuing, being aggra-

vated, at intervals of from ten to thirty minutes, by strong convulsive movements of various degrees of severity, lasting from one to five minutes, accompanied with severe dyspnœa. Thus he remained during twenty-four hours, without sleep, consciousness, with the power of deglutition and articulation, remaining intact. The only voluntary muscles that appeared to be unaffected were those of the arms, and partially so of the face; no medicine was ordered save a calomel purgative.

August 6.—Continues much the same; no effect from medicine. Compound powder of jalap was ordered. Pulse 92; cannot now protrude tongue at all. While the convulsions seize him, he requires to be raised entirely from the bed. In this act, the body moves upon the feet as a fulcrum being, together with the lower extremities, extremely rigid. Four, P.M.—Free operation from medicine, with relief. Ordered Hoffman's anodyne and tincture hyosciamus in drachm doses, every two to three hours.

August 7.—Much as before; no sleep as yet, much thirst, and drinks freely, holding the cup himself; urinates also very freely. Has no pain in wound, which is barely perceptible, nor has had at any time, save when exercised by the convulsive movements. Omitted anodyne of yesterday, ordered tincture cannabis indica, fifteen drops every two hours, terebinthinate liniment to spine, and poultices to abdomen. Four, P.M. slept one and a half hours, the first for more than two days; rigidity less, can sit propped up at an obtuse angle, lower extremities bend upon knees by his own effort, can open mouth one-fourth inch, paroxysms fewer. Continue cannabis indica every hour, if paroxysms are more often; beef tea.

August 8.—Has had two or three severe convulsions, rigidity now very marked; pulse 120; mind clear; no more sleep; did not get medicine, but three times in night: continue it twenty drops every hour; takes beef tea freely; tobacco poultice to abdomen.

August 9.—Has slept perhaps one hour, all told; paroxysms continue at the intervals, before alluded to; some last longer, and are more severe; complains of no pain, save during convulsions, and now and then in right thigh and foot. For two days has had a cramp like pain, confined to right foot, occurring frequently, and relieved by slight flexion of foot upon the leg; muscles of face quiet, save in the paroxysms, when they are strongly contorted; mind clear, talks and swallows freely; left arm paralyzed, moves right readily, still holding his cup; is not apt to have a paroxysm directly after swallowing; which has been noted from the first. Medicine has been very irregularly given; continue it. Two, P.M. Gave chloroform by inhalation, was kept under its influence for five or six hours, during which time he slept; during sleep relaxation of all the muscles ensued.

Thursday, 10.—Pulse 130, very small; countenance has expression of great exhaustion; rigidity as great as before; body more strongly inclined to left side. Chloroform was omitted after nine last evening, as child refused it; commenced giving it this morning. When patient was partially narcotized, a frightful convulsion ensued, lasting from five to ten minutes, giving a strong feeling, as if dissolution were impend-

ing; chloroform was discontinued. Father reports that since midnight, he had had two or three paroxysms, more severe than the one just alluded to. At two, P.M., patient died, no more paroxysms having ensued. Two minutes before death, he was conversing with his parents.

*Remittent Fever of Children.* By J. LEWIS SMITH, M.D.—Dr. SMITH read a paper on the *Remittent Fever of Children*, of which the following is an abstract:—On the 2nd of September last, I was called to visit a boy, four or five years of age, who, during the past few days, had been dull and dejected, refusing, except perhaps in the morning, his play-things and his food. He was sitting by the fire, apparently unwilling to be disturbed, his eyes presenting a heavy appearance, pulse accelerated, a dry cough present, and after a careful examination, detecting no local disease, I pronounced the complaint remittent fever in its mild form. After ten or twelve days of expectant treatment, these symptoms subsided, and convalescence occurred.

A sketch of this case has been presented, not because it is worthy, *per se*, of record, but to serve as an occasion for some remarks on the subject of infantile remittent fever. It is well known to medical men that the expression designating this disease, is applicable to a variety of pathological conditions, and that, therefore, descriptions of it, contained in our standard works, are different, and, to a certain extent, contradictory.

Locock ascribes this form of fever to dietetic errors, and other causes of intestinal irritation. Butter, who published an able monograph on the subject, believes it an epidemic and contagious affection. The most eminent European writers on diseases of children, as Barthez, Rilliet, and West, describe as infantile remittent fever, a form of disease which they regard identical with continued fever of the adult. Taylor, taking a more comprehensive view of the subject, mentions five distinct affections under the generic term infantile remittent fever.

In this country, the two authors on diseases of children, whose works are most extensively read—Drs. Stewart and Condie—the one almost, and the other entirely, ignore all forms of the complaint, except that symptomatic of intestinal derangement, irritation, or inflammation. Dr. Stewart remarks—"From an examination of the opinions of the various authors, compared with some amount of experience in the disease, remittent fever, appears, in general, to be a symptomatic disorder, from derangement of the stomach and intestines, or of the appending viscera; or from an irritative action, at first excited in the mucous membrane of these parts."

Dr. Condie goes still farther in his definition of infantile remittent fever, stating—"It is, in fact, in every instance, either a gastro-enteritis, an ileitis, or an entero-colitis, accompanied by febrile re-action; and were it not that it is noticed as a distinct affection, in almost every work on the diseases of children, we should content ourselves with referring to the account already given of the inflammations of the digestive organs, for its pathology and treatment."

It has occurred to me to treat many cases of remitting fever in



children, both in private and dispensary practice, and my experience has gradually led me to form an opinion of the pathology of the complaint as it occurs in the upper wards of New York, materially different from the theories mentioned above.

It is not my purpose to describe the disease as it has fallen under my observation, except to say that it has presented all grades of severity, from the mild form, described at the beginning of this paper, to that severe grade in which delirium and an almost constant cough attended the exacerbations. My object is simply to present some considerations, in reference to the nature of the disease and the proper mode of treatment.

My observation of infantile remittent fever has been limited to the upper part of this island, a locality eminently malarious; and although the morbid conditions, mentioned by the authors cited above, will, no doubt produce fever of a remitting type in the impressible child, the following facts convince me that the form of the complaint, which I am called to treat, is, in a large majority of cases, miasmatic:—

1. The disease is very prevalent in spring and autumn, and rare in mid-summer and mid-winter, like malarious affections. There are certain streets where I have known it to prevail almost like an epidemic in the vernal and autumnal months. If the disease were, as Dr. Condie states, "in every instance, either a gastro-enteritis, an ileitis, or an entero-colitis," how can this influence of the seasons be explained?

2. Often, not always, the remissions are more marked than would be likely to occur in a symptomatic fever. The child may appear almost well in the morning, but in the afternoon and evening, exhibit such intensity of symptoms as to cause the greatest anxiety on the part of friends.

3. The symptoms are not altogether such as we should expect to find in a purely local affection. The patient will, it is true, when asked where he feels the pain, sometimes place his hand on the abdomen, and pressure upon the abdominal parietes not unfrequently produces great distress. Dr. Condie alludes to this tenderness, evidently believing it to be a symptom of inflammation. But I have always been satisfied that it was neuralgic, from the fact that pressure on the lumbar vertebræ, and frequently on the chest and limbs, caused as much suffering as when it was made on the abdominal walls. The patient, if old enough, will complain, too, of aching in the head, back, and limbs, which is more the symptom of an independent fever than of inflammation.

Again, constipation is ordinarily present, unless in the last stages of the disease. Intestinal irritation or inflammation, sufficient to cause so intense and protracted a fever as is often present, would be more likely to cause diarrhœa.

4. Children, even nursing infants, take intermittent fever; why, then, may they not take remittent fever, from malaria? In my class at the dispensary, children with these diseases are frequently brought in together.



5. I have found that measures directed to the alimentary canal, beyond simple purgation, do more harm than good. They fail to ameliorate symptoms; they weaken and distress the child. Moreover, when remissions occur, quinine will materially abridge the disease.

6. Death seldom occurs from this affection. In one or two fatal cases which have fallen under my observation this result followed convulsions and coma; and Dr. Stewart remarks, "Dissections have furnished but little light on the morbid condition of the system in remittent fever; for, on a fatal termination, the transmission to the brain is the ordinary course of the disease." The mode of death then, and the post-mortem appearances, do not comport with the doctrine, that the intestines are the seat of the morbid process.

Dr. Condie does not agree with Dr. Stewart, but attributes death to inflammation of the intestines. I do not think that the remittent fever which I have treated, if uncomplicated, ever terminates in this way, for I have never seen a case in which abdominal symptoms did not yield to simple measures.

7. Continued fever of the adult is of rare, and infantile remittent of frequent occurrence in the locality of my practice. The latter is not then identical with the former, as it appears to be in London and Paris, from the descriptions given by Rilliet, Barthez, and West.

The above facts appear to me conclusive that the form of infantile remittent fever, which it has been my lot to treat, has been generally of a miasmatic character.

It is very important to understand the nature of this affection, as the treatment will vary according to the theory we adopt. If living in a malarious region, we embrace the Broussaian views of the American authors whom I have cited, and treat the fever as a local disease, we shall fail to ameliorate symptoms, and be mortified and discouraged by the result, if I may judge from my own experience. My reliance at present is mainly on expectant measures, till remissions occur, and then on the exhibition of quinine. In cases thus managed, convalescence has been more speedy and certain, than when opium, calomel and counter irritation have been employed to remove intestinal irritation, or inflammation.

At the risk of appearing presumptuous, I have thus presented a theory of infantile remittent fever not, indeed, novel, for Taylor attributes one variety of it to miasm, but different from that contained in any American and most European treatises on diseases of children. I am the more anxious that the true nature of the disease should be understood, because I believe that the accepted doctrine is exceedingly pernicious to practitioners in malarious regions, and especially to the younger members of the profession who rely more on books than experience for guidance. The fact, too, that remittent fever has been in my practice the most frequent affection of early life, in the vernal and autumnal seasons, gives additional interest to the subject.

## NEW YORK PATHOLOGICAL SOCIETY.

REGULAR MEETING, JUNE 25, 1856, DR. BOLTON, *President*.(Reported by E. LEE JONES, M.D., *Secretary*.)

*Single Heart*.—Dr. ALONZO CLARK presented a *heart* removed from a child, which lived six days and one hour. The case occurred in the practice of Dr. Blakeman, who attributed death to some malformation of the heart. At the request of Dr. Blakeman, he examined it, and on inspection it is seen to be a *single heart*, with one ventricle and one auricle, and apparently, there is no attempt to produce another ventricle or auricle. The aorta is large. One large vessel arises from the ventricle. From the aorta, at a low point, two vessels are given off. In what manner the blood was conveyed to the lungs is not clearly manifest, though he conjectures that these two vessels were the pulmonary arteries. The child suffered but little inconvenience, was a little blue in the face, was well grown and plump.

*Fungus Cerebri—Its Microscopic Examination*.—Dr. CLARK then exhibited a specimen of common occurrence, and not of much interest in itself, namely: a *portion of fungus cerebri*, following a severe injury.

It was placed in his hands by Dr. Buck, and at his desire, he examined it by the microscope, with a view of ascertaining the nature of the material constituting the excrecence.

Surgeons generally consider it to consist of the substance of the brain; he, however, failed to discover brain matter of either kind, but cells and granules were observed in considerable quantity. No nerve fibres were seen. It was constituted differently in different portions. One part is composed of granules of various sizes, greatly resembling in structure the diphtheritic membranous exudation, described by Bretonneau, and a specimen of which was laid before the members at a meeting of the Society some months ago, (in February, 1855). Another part is seen to consist of granular cells with minute nuclei, and another contains cells with large nuclei and nucleoli. No part of the cranium could produce a substance similar to the second variety. It is constituted altogether independent of brain matter. In the first and second parts single fibres are seen.

*Absorption of Skull from Pressure of Pacchionian bodies*.—Dr. T. C. FINNELL presented a *calvarium*, removed from a patient fifty years old, who died of acute bronchitis. On the superior portion of the internal table are four depressions, caused by the pressure of the Pacchionian bodies. In three of them the absorption has extended through the diploe, leaving only a thin shell of bone between the dura mater and the exterior of the cranium.

*Meningitis*.—Dr. FINNELL next exhibited the *heart* of a boy who died of *acute meningitis*. He had always enjoyed good health. Two days previous to his death he was exposed to the sun. In the evening he complained of pain in his head, and during the night he vomited, had high fever, and soon became delirious. Towards the next evening coma commenced, accompanied by slight convulsive twitchings, which

recurred at intervals until death, which took place about forty hours after the attack.

*Autopsy twelve hours after death*, revealed the anterior surface of the brain covered with pus; no arterial congestion. Sinuses moderately filled with blood.

Lungs healthy, but adherent at several points. Mesenteric glands enlarged.

*Serous Cysts of Kidneys*.—Dr. Cox presented a specimen of *serous cysts* of the kidney for Dr. H. N. Bennett, of Bridgeport, accompanied by a written history.

The pathological specimen here presented, was taken from a gentleman, 48 years of age at the period of his death. In a symptomatological point of view, I believe this case to have been almost unique. I had been the medical attendant of this man for thirteen years previous to his decease, and during that period he for the most part enjoyed firm health, having a robust frame, and a degree of enbonpoint approaching at times to corpulence. The only exceptions to his general good health, were occasional attacks of what was considered indigestion, the result or accompaniment of some functional derangement of the liver. At these times he suffered much from abdominal pains, gastric irritability, and diarrhœa; the skin became slightly tinged with yellow, the tongue covered with a thin yellowish coat; the quantity of urine was never much diminished, but during the latter years of his life was much increased, and he was commonly required to rise once or twice each night to void it. The patient dated these attacks from a severe dysentery many years previous, since which time he had had, to use his own familiar expression, these "*troublesome bilious turns*," generally but once a year, however, and that during the summer season. Appropriate treatment directed to the alimentary canal and liver, always relieved these indispositions in a short time.

The summer previous to my patient's death, his health became more seriously impaired, and his indisposition was more persistent. At this time constipation took the place of diarrhœa, but the same loss of appetite, gastric irritability, pale yellow tinge of the skin, etc., occurred as on former occasions. After the severity of the symptoms had subsided, I advised him to a change of air, and acting upon this advice he made a visit to the western part of New York, remaining there several weeks. He then returned home much improved, and continued through the winter to enjoy comparative health, but not the vigor of former years. In the month of April he began again to decline, presenting the same train of symptoms as during the previous summer, with the addition of considerable dyspnœa upon slight exertion. I now began to feel much alarmed at his condition, and thoroughly examined the thoracic organs, fearing that there might be organic disease in that region, but could detect nothing whatever. The alvine evacuations at this time were also perfectly normal in appearance, showing no deficiency of bile or anything to suggest the existence of organic or even functional disease of the liver. Under these circumstances, I naturally adopted the diagnosis by exclusion, and directed my attention to the kidneys. The



urine was of very nearly normal appearance to the eye, but upon testing it with heat and nitric acid, I found it contained large quantities of albumen. The quantity of urine was above the normal standard, and its color somewhat paler than usual. It must now be borne in mind, that my patient had never complained of pain in the renal region, had never had œdema of the extremities, or effusion in the serous cavities, had never manifested any of the cerebral symptoms common in Bright's disease, in short, had never exhibited any of the more positive diagnostic symptoms of organic disease of the kidney. But here was evidently the sole seat of organic disease. This case is still farther remarkable, inasmuch as none of these symptoms were developed up to the period of death, with the exception of coma a few hours before dissolution.

Some six or eight days before his decease, my patient began to complain severely of sore throat, and this anginose affection appeared to increase in intensity, up to the last day of life. The mucous membrane of all the posterior fauces exhibited a deep red color, very nearly resembling that of the angina which usually accompanies erysipelas. The dyspnœa at this time was very great, and formed the most urgent symptom. Nothing afforded even temporary relief, and he gradually sank, becoming comatose a few hours previous to dissolution.

*Post Mortem.*—The autopsy presented a remarkably healthy condition of all the thoracic and abdominal organs, with the exception of the kidneys. These were both much increased in size, the enlargement being the result of the development of numerous cysts in the whole substance of the organ. They varied in size from that of a large filbert to that of a pin's head. The majority were filled with a clear albuminoid fluid, having not at all the odor of urine; a portion contained a muddy fluid, varying in color from a deep brown to a brick dust red, appearing to me like the *debris* of old extravasated blood mingled with the clear albuminoid fluid above mentioned. Portions of the tubular substance of both kidneys appeared to be in a comparatively normal condition, but the cortical substance seemed almost wholly in a degenerated state, and here the cysts were large and very numerous.

The development of cysts in the kidney is by no means a rare occurrence, and their genesis is so well determined that it would be idle for me to attempt to present anything new upon this subject; but I believe it to be very rare that this degeneration proceeds to so great an extent as in the present case, while the general health is so well and so long preserved, and so few of the ordinary symptoms of renal disease are developed. The organic changes in this case must have been the work of years; and yet, up to a few months previous to dissolution, no serious derangement of the general health occurred, and no symptom pointing directly to the seat of disease. I attributed the dyspnœa accompanying the termination to uræmic poisoning, as it was too gradual and of too long continuance to admit of the supposition of œdema glottidis, one of the very rare terminations of *morbis Brightii*.

The only plausible explanation of the great want of renal symptoms for so long a period in this case, appears to me to be in the hypothesis



that the cyst-formation was the predominant pathological element, and that a large number of the urinary canals remained for a long time previous, and in a comparatively normal state. It may readily be conceived, adopting the cyst-genesis of Frerich and others, that the blocking up of isolated tubuli by the fibrinous exudation, and the consequent distension of the Malpighian capsules into cysts, might go on for a series of years before involving so large a portion of the kidney as to cause the system seriously to feel the organic change and consequent loss of function; and furthermore, this gradual degeneration of the kidney would be much better borne than a sudden change in a large portion of the organ, such as is common in other more acute forms of Bright's disease.

Regular Meeting, September 10, 1856.

*Fluid from Hydrocephalus.*—Dr. WM. DETMOLD exhibited about half a pint of clear, limpid fluid, which he had removed to-day from a child laboring under hydrocephalus. He had frequently operated—in one instance, he was informed the child had recovered; otherwise, he had never cured a single patient by puncture and pressure. His experience was against hoping for good results. Surgeons generally are timid as to the introduction of air—in one of his cases air entered the cavity accidentally—no bad consequences ensued.

*Fibrous Tumor of Uterus.*—Dr. T. C. FINNELL presented the *uterus* of a colored woman, æt. about 46 years, who was subject to occasional attacks of epilepsy. Just within the cavity of the uterus, under the mucous membrane, was found a small *fibrous tumor*. No other lesion was observed.

*Peritonitis.*—Dr. F. presented the *rectum* and *colon* of a gentleman, some 50 years old. Seven years ago he was attacked with dysentery. Since that time he had frequent derangements of the digestive organs—constipation alternated by diarrhœa. Thirteen days ago, a bougie was gently introduced up the rectum. Symptoms of peritonitis were developed on the subsequent day. He died yesterday.

*Post mortem examination* revealed evidences of general peritoneal inflammation—the abdominal cavity contained six ounces of pus. The veins of the colon and rectum were in a varicose condition. The lower part of the rectum was ulcerated and riddled in every direction. There were two fistulæ in anno, which opened into the rectum; one of them terminated an inch from the anus, the other an inch and a quarter.

Dr. MARKOE stated that the patient, from whom the specimen was obtained, had been under his care five years ago. He was then affected with diarrhœa and tenesmus. An examination by the speculum, at that time, indicated the present condition of the rectum.

Dr. POST remarked the specimen was interesting in another respect, viz., the point of termination of the fistulæ internally, just within the sphincter, its most usual place; the probe can, however, be passed up further, owing to a loose mucous membrane, which always accompanies these cases.

*Scirrhus.*—Dr. FINNELL next presented a *cancerous tumor*, removed

from a female, æt. 29 years, married; the mother of four children, all of them of the strumous diathesis. (See history.) She has always enjoyed feeble health, is of a dark complexion, and thin spare habit of body. Three years ago she noticed a small movable tumor on the left side, five inches below the nipple. After a quiescent period of two years and a half, it commenced growing rapidly, accompanied by sharp lancinating pains.

On the 16th of June she was placed under the influence of ether, and the tumor removed. It resembled a scirrhus tumor, taken from the breast in all its parts. Examined by the microscope, it showed a few shells of irregular size and shape, with a large quantity of granulous matter imbedded in a structureless blastema.

Mrs. F. informed me that her mother had a tumor on the back a little below the right scapula. It is irregular in shape and larger than a hen's egg, causing no pain or inconvenience. She has given birth to thirteen children, all of a scrofulous constitution.

Mrs. F.'s grandmother died of cancer of the left breast at the age of forty-three. Her great grandmother also died of cancer of the breast, of fourteen years' standing, at the age of forty.

One aunt, æt. 35, had a tumor of the left breast, the size of a hen's egg, eleven years ago. From the time of its appearance it grew rapidly for one year, it was then cauterized freely, and disappeared. The cicatrix is very painful at times, especially in warm weather.

Another aunt, æt. 38, the mother of two children, had a tumor in the left breast fourteen years ago. At the end of eighteen months from its first appearance, it was gradually removed by the use of iodine.

Another aunt, æt. 44, the mother of three children, has a tumor the size of a pigeon's egg on the instep, of ten years' standing; it is growing rapidly at present, attended also with pain.

Another aunt, æt. 48, the mother of two children, has a tumor on the right clavicle, of six years' standing, it gives no pain or inconvenience.

Another aunt, æt. 50, the mother of nine children, has a tumor in the right breast, of two years' standing; at present it is growing rapidly.

In five out of six cases, no children were born after the appearance of the tumors. Mrs. F.'s father died of consumption at the age of thirty-eight. Her grandfather died also of consumption at the age of forty-two.

*Chronic Rheumatic Arthritis of Hip.*—DR. F. M. WRIGHT presented a specimen of chronic rheumatic arthritis of hip. The patient was an old colored man. No history of the case could be obtained, except that for some sixteen years before his death, he had been so lame as to be almost entirely unable to work, and at intervals, suffered severe pain in the hip-joint.

He died from some other affection, and on *post-mortem examination*, the joint appeared to be firmly ankylose, but after long-continued maceration, the bones separated, and presented very clearly the marks

characteristic of the disease, viz.: enlargement and flattening of the head of the femur, absence of articular cartilage and partial eburnation of its articular surface, and bony vegetations surrounding it. Precisely corresponding changes have taken place in and around the acetabulum, together with ossification of its cotyloid ligament. These may all be seen with great distinctness in the specimens.

*Cyanosis.*—DR. GEORGE T. ELLIOT presented a heart obtained from Mary C., who died on the 8th of September, aged four weeks. From her birth she had presented every symptom of cyanosis, and no other disorder of function than those referable to the circulatory system. She was kept on her right side, with her head elevated, the greater part of her life. On the 6th inst., she was bluer than I had ever seen her, and cold, though she nursed well, and presented no embarrassment of respiration or circulation. She was well rubbed and wrapped up, and warmth restored. On the 7th, she appeared as usual. Her skin, both on the body, face, and extremities, very much mottled, and especially blue at the extremities. She nursed well, and slept well, and continued to do so during the morning of the 8th. In the afternoon a change was observed, and she died easily and without pain. No convulsions, no stupor, no marked deepening of color; but her breathing becoming gradually fainter, finally ceased. The lungs were healthy, but little congested; collapsed cell; pericardium and pleuræ healthy in every respect. Circumstances prevented the removal of all the thoracic viscera, and the heart alone was secured without the ductus arteriosus. The heart is natural in size and appearance. The foramen ovale and Eustachian valve normal in position and size. The foramen ovale was sufficiently open at its upper border, as to admit a No. 6 steel sound. The coronary vein will admit a No. 5 steel sound, and the probe can pass into an open space occupying a large proportion of the wall of the left auricle, and extending as far as the base of the left auricle, below as far as the line of demarkation between the ventricles and left auricle, and above as far as a good half inch. Aortic valves hold water.

*Aneurism of Left Ventricle.*—DR. ELLIOT also presented a specimen of aneurism of the left ventricle. The following is the history of the case:—Isabella Woods; Ireland; æt. 32; domestic; admitted to Bellevue Hospital August 16th, with the following symptoms: great dyspnœa; congestion of the face and neck; frequent and small pulse; hands and feet cold and blue. With the exception of an attack of rheumatism seven years ago, her health has been uniformly good until the last six months, when her breath has been gradually growing short. A fortnight before admission, her feet and abdomen began to swell. When admitted her abdominal walls were extremely tense, though the contained fluid did not appear to be great in quantity. There were also the signs of effusion into both pleural cavities, reaching on the right side somewhat above the inferior angle of the scapula, and rather less in quantity on the other. A distinct systolic blowing sound was heard over the apex, second sound natural; heart hypertrophied, with the apex reaching to the left of its normal beat; the patient was



restive and suffering, and all satisfactory exploration was obtained with difficulty; the legs were extremely œdematous and painful, and when punctured in several places, discharged copiously. Ordered a hydragogue cathartic.

August 19.—Passed a bad night, unable to sleep, tossing from side to side in search of relief; bowels freely moved, but without relief. The urgency of the symptoms, and the apparently hopeless character of the case, led to the belief that paracentesis might afford some relief; and in the evening, some six quarts of fluid were taken from the abdomen. The omentum or intestines interfered with the flow, so that the last two quarts were only withdrawn by the aid of probes passed through the canula.

August 18.—Slept all night, much relieved by the operation. Dyspnoea still urgent. Diuretics and stimulants ordered, but without benefit. She steadily grew worse; effusion in chest and abdomen increasing, and greatly desired the relief from another operation; but as she had suffered more pain than usual in the vicinity of the wound, her wishes were not acceded to.

On the 21st, at five P.M., she died. *Post mortem*, fifteen hours after death; face and neck extremely congested; abdomen considerably distended, containing about ten or twelve quarts of fluid; some fresh coagulable lymph on the convex surface of the liver; no other evidences of peritonitis; liver weighed 3lbs. 11oz.; capsule of Glisson commencing to contract; kidneys much congested; lungs healthy, with some old tubercles and cicatrices at apex of the left; they were much compressed by the pleuritic effusion, which amounted in all, to some eight or ten quarts; heart hypertrophied, weighing with pericardium  $23\frac{1}{2}$  oz; the pericardium contained 1 oz. of serum, and was attached, for about a space of three inches in diameter, over the anterior wall of the left ventricle, the adhesions were not very strong, readily detached, and leaving a red inflamed surface; aortic valves healthy; mitral valve, though sufficient, yet had its anterior curtain slightly thickened. The anterior wall of the left ventricle, exhibited a dilatation soft to the touch, corresponding in extent with the adhesions of the pericardium; the wall was here very thin, about a line in thickness; the cavity was filled with a large clot, laminated, about half an inch in thickness, and three in diameter, nearly circular in form and loosely adherent towards the base; between the laminæ was a cavity, holding near half an ounce of whitish fluid, containing pus. The heart did not appear to be the seat of fatty degeneration.



## PART SECOND.

### REVIEW AND BIBLIOGRAPHICAL NOTICES.

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ART. VIII.—*The Transactions of the American Medical Association*, instituted 1847. Vol IX. Philadelphia. Printed for the Association. By T. K. & P. G. COLLINS. 1856. 8vo. pp. 907.

THE ninth volume of the Transactions of our National Association comes to us generous in size, rich in material, punctual in its time of appearance, and creditable in its mechanical execution. Many of the papers abound in valuable facts, and evince patient and industrious research, and the work, as a whole, reflects honor upon the body from which it emanates. The opening paper is the farewell address of Dr. George B. Wood, of Philadelphia, former president of the society, written with good taste, and with the best spirit, in which he takes a commendatory view of the past and present of the association, and a hopeful view of the future.

The first of the scientific papers is Part Second of his Report on *Deformities after Fractures*, by DR. FRANK H. HAMILTON, which includes the consideration of fractures of the scapula, arm, forearm, and hand, and occupies one hundred and sixty-three pages. This portion of his subject is abundantly illustrated by cases of different forms of fracture of these parts, and by plates of specimens, and of different kinds of apparatus, and also by numerous quotations from the works of different authors as to their mode of treatment. The labors of Dr. H. on this subject are very creditable to him, and are rich in practical results, and have already been acknowledged by the profession in different ways.

The next paper in order, the report on *Hydrophobia*, embodies much interesting and valuable information respecting a disease whose almost unvarying fatality invests it with a well-deserved horror, and affords a strong stimulus to renewed and increased effort to throw light upon its pathology and treatment. DR. T. W. BLATCHFORD, of Troy, the chairman of the committee, deserves credit for the industry with which he has collected one hundred and six cases of the disease from physicians in different parts of our own country, a large proportion of which were obtained by personal application to the individuals whose names were connected with them at the time of their occurrence. Of these cases, he gives a schedule, containing the description of the cases, the authority for them, and the time when each patient was bitten, sickened, and died. The investigations of our author go to show that rabies, contrary to popular prejudice, occurs most frequently in cold countries, and

during autumn, winter, and spring; and that of the whole number of cases which occur out of the tropics, during the year, nearly an equal proportion occur during each month of the year. Of two hundred and fifty cases in France, England, and this country, seventy-eight occurred during the months of March, April, and May; sixty-five during the months of December, January, and February; fifty-nine during June, July, and August; and forty-eight during September, October, and November. "Hence," as he says, "it may be inferred that the appearance and prevalence of the disease at particular seasons, and in certain localities or regions, are *accidental*, and in no way connected with or produced by any thermal or sidereal influence." These facts may quiet the apprehensions which we have been led to associate with the "dog-day" season, when so many of that faithful race have to pay the forfeit of their lives to the supposed danger of originating and communicating this fell scourge; and show that the precautions against the communication of the disease should not be limited to the short space of the hot months of the year. Rabies seems to be a rare disease in tropical climates. Nor does putrid meat, or want of food and drink, ever generate the disease in the dog, as has been satisfactorily proved by experiments, and is also shown by the absence of it in countries where dogs are in the habit of eating putrid flesh. We are, therefore, as the author very candidly remarks, driven to the humiliating acknowledgment that the true cause of the disease is not known, or very imperfectly understood. He adds, "In view of the conceded inadequacy of all the external causes we have considered, to account for the origin of the disease, and the fact that nearly every case of genuine rabies has been traced to the bite of some animal, it is fair to conclude, *it never proceeds from any other cause.*" He thinks that the peculiar liability to rabies in those animals by whose bite it has been followed, consists in a *constitutional irascibility*, and says that the dog is more prone to anger than any other domesticated animal, this irascible temperament varying in degree in different species of the genus, and in different individuals of the same species. This constitutional irascibility of the dog he regards as the basis of the true etiology of canine madness.

The term rabies, our author says, does not necessarily imply *disease*, but violent passion or strong emotion, and is synonymous with rage, fury, or anger; and he gives several instances in which rabies has been occasioned by the bite of an animal not rabid. Some consider rabies an inflammatory disease, while a large number regard it as a *nervous affection*. The fact that the disease has been prevented by excision of the cicatrix after it had become painful, swollen, and discolored, would seem to afford positive proof that the virus is not directly absorbed into the system, a point of great practical importance, as well as of encouragement, as it allows of the prevention of the disease by excision of the bitten part any time before the occurrence of the general symptoms which indicate constitutional infection, which may not take place before the end of one, two, or three weeks. The virus is thought, by one writer, to *lay dormant* till the pain in the bitten part comes on, and therefore, that excision and ablution might afford relief at that time,

and even when the patient is suffering under hydrophobia. At the same time, it is better always to perform the excision of the bitten part, when practicable, as soon as possible after inoculation. The cases of hydrophobia collected, show that very few result from bites on parts of the body protected by clothing, and also that it is not necessary that the animal inflicting the wound should itself be diseased.

The average period of *incubation* in the eighty-nine cases in which it was ascertained was about seventy days, being thirty days and under in twenty-three cases, and upwards of two hundred days in six cases. The average duration of the disease in the seventy-two fatal cases in the human subject was three days—five died on the first day, twenty on the second, twelve on the third, twenty-seven on the fourth, etc., and one on the twenty-first day. In eighty-nine cases out of one hundred the injury was from the bite of a dog; in nine, from that of a cat; and in one each from a raccoon and a fox; one supposed from the saliva of a cow; and one from that of a calf. In forty instances the injury was upon the hands; in fifteen on the face; in eleven on the leg; and in nine on the arm. The cases embodied in the report of this committee present many points of interest in the history and symptoms of this singular and fatal disease.

Next in order follow two Reports, the first by DR. S. D. GROSS, on *The Causes which Impede the Progress of American Medical Literature*; and the second, that of the committee on *Medical Literature*, signed by DRs. R. BRECKINRIDGE, J. B. FLINT, and D. L. MCGUGIN. Both well written, but which we pass with a mention of their titles, as we must also that of the next paper, a report of the committee on *Plans of Organization for State and County Societies*, as the amount of material in the volume prevents our giving even an abstract of all the papers.

We next come to a Report on the *Changes in the Composition and Properties in the Milk of the Human Female, Produced by Menstruation and Pregnancy*, by DR. N. S. DAVIS, of Chicago, Illinois, with plates showing the appearances, under the microscope, of milk at different periods of lactation, both when menstruation is and is not taking place, and when it is complicated with pregnancy, with tables containing the whole amount of solid matter, and also of butter, sugar, and extractive matter, casein, and salts in that fluid, under these different circumstances, presenting well-marked results. The conclusions drawn by Dr. Davis as to the changes produced by menstruation and pregnancy in the *composition* of the milk are—

1. The occurrence of pregnancy during lactation, produces a very marked diminution of all the solid or nutritive constituents of the milk, such diminution continuing to increase as the pregnancy advances.

2. In examining the separate proximate constituents, it will be observed that a much greater relative diminution takes place in the casein, the butter or oil, and the salts, than in the sugar and extractive matter.

3. There appears to be added to the milk secreted during the progress of utero-gestation, some of the *granular* bodies or colostrum cor-



puscles, and numerous minute infusoria or animalcular germs, which have been very rarely found in healthy milk.

4. Changes, the same in kind, take place in the milk secreted after the establishment of regular menstruation, but much less in degree; and the relative diminution of the several constituents is more uniform.

Cases quoted by Dr. D. show that the *quality* of the milk, as proved by its effects on the child, is also unfavorably influenced both by pregnancy and by menstruation, but by the latter less than by the former, presenting practical bearings of great importance to the profession. It is hoped that the investigations so carefully and accurately commenced by Dr. Davis, may be continued and extended so as to establish the conclusions arrived at by him on a still firmer basis.

The paper which follows, a Report on the *Sanitary Police of Cities*, by DR. JAMES M. NEWMAN, of Buffalo, N. Y., contains much valuable and interesting matter, but of a kind which will not allow of an abstract, without encroaching too much upon the limits assigned to our notice.

Of the next Report, that on the *Treatment of Cholera Infantum*, by DR. A. J. FULLER, of Bath, Maine, extending over six and a half pages, we regret to be obliged to say that we consider its brevity its greatest recommendation. Dr. F. seems at a loss to account for there being so little mention made of this disease by European writers, overlooking the fact that it is not met with on the other side of the Atlantic. The report contains nothing that is new, either on the pathology or the treatment of this scourge of our infant population, unless it be the application of leeches to the right hypochondrium in the early and primary state of the disease; and the use of local depletion by the same means when swelling of the bowels or heat about the head is present, in which cases he says they should never be neglected. His experience must be different from our own, and from that of most of those practically familiar with the disease in this latitude.

Occupying the next thirty-five pages, we have the Report on the *Use and Effect of Applications of Nitrate of Silver to the Throat, either in Local or General Disease*, by DR. HORACE GREEN, a subject which has occupied the attention of the profession, to a considerable extent, for two or three years past. Dr. G. speaks in this paper of the effect of nitrate of silver in the treatment of—1. *Follicular Pharyngo-laryngeal disease*; 2. *Acute and Chronic Laryngitis*; 3. *Membranous Croup*; 4. *Œdema of the Glottis*; 5. *Whooping-Cough*; 6. *Spasmodic Asthma*; 7. Of its effects employed as a *Topical Remedy* in the treatment of *Tuberculosis, following or complicated with Bronchial Inflammation*. The subject is so extensive that a mere abstract of the report would occupy considerable space, and as it has been so thoroughly discussed in the medical periodicals within a recent period, we pass it over without further notice.

Following this are—1. A Report on the *Best Mode of Rendering the Patronage of the National Government Tributary to the Honor and Improvement of the Nation*, by DR. JOSHUA B. FLINT; 2. A report of the Committee on *Education*, by DR. WILLIAM HENRY



ANDERSON; and 3. A Report on the *Medical Topography of the Eastern Shore of Maryland*, by DR. P. WROTH, of which we can only mention the titles.

The present volume of Transactions is rich in facts and observations on the subject of yellow fever, containing a *History of the Epidemic of Yellow Fever in Charleston, S. C., in 1854*, by DR. D. J. CAIN; a report on the *Epidemics of Louisiana, Mississippi, Arkansas, and Texas*, by DR. E. D. FENNER, of New Orleans, with a sketch of the yellow fever of Norfolk and Portsmouth, Va., etc.; and a Report on the *Meteorology, Mortality, and Sanitary Condition of New Orleans, for the years 1854-5*, by DR. E. H. BARTON, of New Orleans. From these we have taken some facts, which we thought would prove of interest.

The heat in Charleston was greater, during the summer of 1854, than that of any year since 1804, the thermometer reaching 95° on the 9th of July. The mean dew-point in May was 68·67; June, 72·50; July, 76·70; August, 77·29; September, 73·83. The whole number of estimated cases of the disease that year was between twenty and twenty-five thousand, out of a population of fifty thousand; say one in nearly two of the population, and yet the mortality was comparatively *very small*, the number of deaths being six hundred and twenty-seven, or *about three per cent.* Deaths are recorded from the week ending August 19 to the week ending November 25, the greatest number having occurred during that ending September 16. Of the whole number of deaths, six hundred and twelve were in whites, and fifteen in blacks and colored. Forty-eight were natives of Charleston; and of these, forty-three were whites and five blacks—the latter were all children. No native adult black died of the fever. The average mortality in hospital practice was twenty-nine per cent; while that in private practice could not have been the one-half of one per cent. White children of all ages were attacked,—from three to four months up to fifteen and twenty years. *Native* children, of *foreign* parents, appeared to be more liable than those of *native* parents. Several native children, who had the disease in 1849 or 1852, had it again this year; a few of the number severely. Many adult foreigners, who had suffered an attack of the disease in a former epidemic, were attacked again; and, in a few cases, recently arrived strangers had it twice during the season. Very few, either white or black, native or foreign, acclimated or non-acclimated, were attacked after the climacteric period of life, say forty-five or fifty years of age. The proportion of recoveries after black vomit was greater than at any former prevalence of the fever. Of seventy-nine who had it in the Roper Hospital, nine recovered.

Prominent among the *exciting* causes of the disease, were a wetting by rain, and sleeping in the open air, either under an awning, or without any covering overhead. The shortest time in which exposure to the poison of yellow fever was followed by the effects, was *somewhat less than two hours*. The time intervening between midnight and six A.M., was the period of the twenty-four hours at which the disease generally invaded.

With regard to the *treatment* of yellow fever, Dr. Cain says, that the profession of Charleston has generally settled down upon the opinion that the disease cannot be *cured*, but *may* be *conducted* to a favorable termination. The sulph. of quinine utterly failed to act as a prophylactic in preventing an attack. The plan of treatment generally pursued was to evacuate the bowels at as early a stage of the disease as possible, by means of a mild cathartic, say calomel, or calomel and rhubarb, followed by Epsom salts or castor oil, care being taken to avoid ptyalism, which was found to be decidedly hurtful. Neutral mixtures were prescribed to act upon the skin and kidneys; blisters to relieve gastric irritation; opium, in some form, to allay jactitation, and induce sleep; ice in pellets, and, when tolerated, ice-water *ad libitum* was allowed. Food was given as soon as tolerated by the stomach, and stimulants every hour, or two hours, to keep up their effect, without allowing the secondary or *depressing* effect to recur.

As to the origin of the yellow fever in Charleston in 1854, Dr. Cain brings forward facts which, he thinks, exclude the agency of all terrestrial and meteorological causes in its production, and believes in its importation from abroad, in favor of which he gives a series of facts, connected with the arrival of vessels from Havana. But our limits will enable us only to record his opinion, without detailing the facts upon which it is founded. Dr. C. also records his opinion in favor of the contagiousness of the disease.

The Report of Dr. Fenner is occupied mostly with the subject of yellow fever; the cholera, the only other disease which was epidemic during the period embraced by the report, (the years 1854 and 1855,) being passed over with a few very general remarks at its close. Dr. F. says, that the yellow fever of these two years was fully as malignant at New Orleans as the memorable epidemic of 1853, and that the sufferers and victims would have been equally numerous, if there had been as many *susceptible* subjects exposed to it. The total mortality of the city for 1854 was eleven thousand three hundred and forty-seven, of which number two thousand three hundred and sixteen died of yellow fever; for 1855, the total mortality was ten thousand and ninety-six, of which number two thousand five hundred and ninety-eight fell victims to this disease. Dr. Fenner advocates the intimate relationship between intermittent, remittent, and yellow fever, considering them "as *varieties* of disease, springing from a common remote cause, which may be modified by various attendant circumstances in the earth, air, and human constitution, and thus produce a corresponding variety of effects."

With regard to the mode of communication of yellow fever, Dr. F. believes "that, under favorable circumstances, and within a limited region, the morbid cause may be conveyed from one place to another, and take effect upon persons thus exposed to it."

As to the *treatment* of the disease, Dr. F. says, that the general opinion of the profession in his neighborhood now is, that hitherto they have been giving too much medicine in yellow fever, while all that is necessary is to assist nature in the removal of the *febrile cause*.

He thinks that we may have been accustomed to attach too much importance to *post-mortem examinations*, and that we should study more carefully the nature of disease *during life*, and the effect of remedies upon it. Dr. F. found unexpectedly good effects from the use of the *muriated tincture of iron*, so boldly advocated by the late Dr. Wildman, of Savannah. The course pursued by Dr. F. was first, to evacuate the bowels with castor oil, or some other mild purgative, and then commence with the tincture of iron, in doses of twenty drops, diluted with cold water, every two hours. The effects of the remedy were, for the most part, satisfactory, and he thinks it deserving a further trial by the profession. An appendix to the report contains eleven communications on the subject, from physicians in different parts of the States embraced in it.

Annexed to Dr. Fenner's Report, is an interesting and valuable sketch of the fever of Norfolk and Portsmouth, Va., by the author, from personal observation. Dr. F. remarks, that suppression of urine was more common in the epidemic in those places than in any he ever witnessed, and was always of very serious import. When there was *total suppression* for twenty-four hours or more, it was as rare to witness recovery as from the worst form of black vomit. Dr. F. is not sure that he saw any effect in restoring the quantity, when very low, from any of the remedies which were used. Black vomit was exceedingly common in this epidemic, and there were numerous recoveries from it. Recovery from it was most common to the youthful, but several instances were seen among persons of more advanced age. Some of the most obstinate cases of this epidemic were marked by an almost perfectly *natural* tongue. In several cases, severe hunger was a prominent symptom, and such were very apt to terminate fatally. There were more deaths among the blacks of Norfolk than have ever occurred in any epidemic at New Orleans. Dr. F. has nothing new to offer respecting treatment, in connection with this epidemic. A great variety of plans were tried, as we should expect, from so many physicians, from different places, and with different views. The mortality was large under any treatment that was used. Dr. F. says, that "either the disease was *unusually malignant*, or the constitutions of the people had *less capacity for resisting its assaults*." He adds, "I thought I saw injurious effects from *over-medication*, but it was notorious that the opposite, or *do-nothing* system of the homœopaths was signally unsuccessful; and the survivors appeared to feel that their friends had been lost without a fair struggle against the destroying enemy." The average population of Norfolk, during the pestilence, was estimated at about six thousand, and the number of deaths at two thousand; but Dr. F. thinks that the mortality did not exceed one thousand six hundred. The mortality at the New Howard Infirmary, and also at the U. S. Naval Hospital, was about thirty-five per cent., or one in 2.80 of the admissions. Of about seventy physicians and second-course medical students, who went to the assistance of Norfolk and Portsmouth, twenty-one died.

The *origin* of the disease seems to be involved in doubt, opinions



being divided between two sources, viz.: a local cause, in connection with a peculiar constitution of the atmosphere, and a morbid germ imported by the steamship *Ben Franklin*. Dr. F. inclines to a belief in its local origin. With regard to its communicability, however, there seems to be a general concurrence of testimony to show that it was neither contagious nor infectious beyond the limits of Norfolk and Portsmouth. Numerous cases were removed to other places, and in not a single instance was it communicated to persons coming in contact.

The Report by DR. BARTON on the *Meteorology, Mortality, and Sanitary Condition of New Orleans*, for the years 1854 and 1855, was prepared for, and read before the New Orleans Academy of Sciences, but was accepted by the Committee on Epidemics, of the Association, as a contribution to the present volume, of which it is a valuable one. Its author is already very favorably known to the profession in connection with this branch of science, by the able report of the sanitary commission of New Orleans on the epidemic yellow fever of 1853, in that city, of which he was the chairman. His interesting and laborious observations would seem to establish the direct connection between specific climatic conditions and yellow fever, cholera, and "sun-stroke," as it is erroneously called; and, what is of great practical importance, that these conditions require an *adjunct* to produce their fatal results. For the development of yellow fever and cholera, filth or malaria is indispensable—no concentration of heat or humidity combined, being able to produce the first of these, and no variation of these with the drying power being able to produce the latter. Dr. B. says, "humidity, in conjunction with heat, is essential to the evolvment of all the higher grades of fever, and when filth or malaria is present, fever will certainly break out. The character of the fever will, in a great measure, depend upon the degree of temperature and humidity, the amount of filth, and the susceptibility of those exposed; from the Egyptian plague and yellow fever to typhus gravior and mitior and bilious fever." Dr. B. insists upon two general conditions as being everywhere necessary to the production of the great mass of zymotic diseases: the first and most important, which has been classed as terrene, embracing all filth in its widest acceptance; and the second, meteorological conditions. The first of these is within the control of legislative action, and something may be done even towards modifying the latter, as is shown by our author, to whose paper we must refer our readers for much interesting and valuable information connected with this subject.

The next paper is a short Report on *Strychnia, its Physiological Properties and Chemical Detection*, by DR. LEWIS H. STEINER, of Baltimore. The toxicological effects of this article on the system are illustrated by two cases: that of Pierre Daste, as given by Professor J. Cloquet, when the patient lived nearly three days; and that of Dr. Gardiner, of our own country, who died within three hours and a half. The tests mentioned for its detection are three, of which two only are strictly chemical, the third being based upon physiological properties, that lately suggested by Dr. Marshall Hall, of England, and founded



upon the susceptibility of live frogs to the influence of this poison. By immersion of this animal in any liquid containing strychnia for two or three hours, Dr. H. was able readily to detect the one-hundredth of a grain of the acetate in one experiment, and in some others, the one-five-hundredth, and even the one-thousandth of a grain, by means of the specific effects produced upon this animal.

A partial report upon a *Uniform System of Registration of Births, Marriages, and Deaths, and the Causes of Death*, is next given by Dr. G. S. PALMER, the committee appointed to report upon this important subject having been interrupted in their labors, in consequence of the death of their chairman, Dr. M. W. Wilson. Dr. P. has therefore only presented an outline as the basis of a law to be proposed in each State, when the present law is defective, or when there is no law at all. We trust that such measures will be adopted, ere long, as will secure an object so desirable as such a registration would be, and hope that the hint will be acted upon, if possible, that blank forms for this purpose should be prepared and circulated through the several States by the general government.

The concluding paper is the prize essay on the *Arterial Circulation, its Physiology, and Chief Pathological Relations*, by Dr. HENRY HARTSHORNE, of Philadelphia. The physiology of the arteries is studied under the different heads of—1. Histological Indication, in regard to the smooth or organic muscular fibre, elsewhere; 2. Analogy, from comparison of the circulation of other animals of different types; 3. Observation of Accidental and Pathological Deviations; 4. Experimental Enquiries; and, lastly, Comparison of Theories. The summary result of the investigations of Dr. H. gives, as the most probable opinion or theory (in opposition to most recent authorities, but in accordance with the views of Hunter and Sir Charles Bell, and particularly with those of Carpenter,) that, as all the arteries have a muscular coat, this is endowed, like the other muscular tissues of hollow viscera, with a power of alternating contraction and relaxation; that this contraction is exerted in immediate connection with, and succession upon, the beat of the heart; *the arterial systole thus combining with that of the ventricles to make up the pulse*; that the variation occurring in different parts of the circulation is to be accounted for, to a considerable extent, although not entirely (a capillary power, or nutritive affinity, being also acknowledged), by the different degrees or kinds of *action* of the arteries; that the normal modes of stimulation by which these vessels are affected are chiefly three:—1. That of *distension*, from the impulse of the heart; 2. The stimulus of *oxygen* in the red corpuscles of the blood, by which all muscles are maintained in activity; and 3. The direct (*and reflex*) influence of the *nervous system*, by means of the arterial or vaso-motor nerves; lastly, that it is by the centres of the sympathetic system that the principal control is maintained over the arteries, as well as over the heart; while they are subjected also to influences directly transferred or reflected from the cerebro-spinal axis, and to some which result from contact with the external world.

The *plan of organization of the Association*, with the resolutions

adopted at its different meetings, and a list of the officers and permanent members of this body, close the volume, which we consider one of the most valuable that has yet been issued, and which bears internal evidence that this great plan for the advancement of medical science, and for promoting concentration of action and harmony of feeling in the profession, is in a state of progress and of promise. Long may it continue to exercise its elevating and purifying influence upon our profession, and through it, upon the health and welfare of our country and of the world.

H. D. B.

ART. IX.—*Digestion, and its Derangements. The Principles of Rational Medicine applied to Disorders of the Alimentary Canal.*

By THOMAS K. CHAMBERS, M.D., Physician to St. Mary's Hospital, London. New York: Samuel S. and William Wood, 261 Pearl Street, 1856. 8vo. pp. 441.

THIS work consists of two parts, the first being devoted to the physiology of digestion, and the second to its derangements. This method of presenting a subject, is eminently adapted to give the reader correct ideas, and to make him a rational practitioner. We entirely agree with the author in the statement, "that in no way is both the science and the art of healing so likely to be improved, as by the association in its literature, and through that in the minds of its practitioners, of pathology with physiology, rather than with morbid anatomy:—that juster theoretical views are elicited by looking upon disease as a part of the phenomena of life, than as the producer of appearances seem after death."

The first part treats of normal digestion, the minute anatomy of each organ concerned in this process is given with its physiological action. Thus we have analyzed the structure and function of the mouth, stomach, small intestines, pancreas, liver, etc. We shall pass this portion of the work with the simple remark that each subject is carefully written, and the latest discoveries by the microscope, and organic chemistry are recorded.

In chap. X., of Book I., the author considers the "Physiological Action of Substances Submitted to Absorption in the Alimentary Canal." Foods are divided into the *complimentary* and *accessory*, the former are such as may become portions of the typical solids, and fluids of an animal body, the latter are of use in hastening, or arresting the metamorphosis of the organic structures. The best example of what the author calls *complimentary foods*, is milk, and of *accessory foods*, alcohol. The discussions of the physiological action of foods which follows this general division, is of great practical value, although many of the conclusions are scarcely warranted by the facts adduced.

The second book is devoted to the special derangements of digestion. The reader derives great advantage in the study of the diseases of the digestive organs, from a careful study of the preceding pages, on the physiology of digestion. In the treatment of the derangements

of digestion, the author lays great stress on the importance of the so-called *accessory foods*. These views are obnoxious to criticism, if not censure.

As a whole we regard the work of Dr. Chambers as not only an important addition to the literature of the physiology and diseases of digestion, but a most commendable effort to advance the domain of rational medicine.

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ART. X.—*A Treatise on Therapeutics and Pharmacology, or Materia Medica*. By GEORGE B. WOOD, M.D., Professor of the Theory and Practice of Medicine in the University of Pennsylvania. Two vols., 8vo. pp. 840—901. Philadelphia; J. B. Lippincott & Co. 1856.

WE bring here to the notice of our readers a treatise from the pen of one of the authors of the *United States Dispensatory*. Perhaps a better exemplification than these volumes afford of the truth of the remark that "an author writes best on his favorite subject," cannot be more easily found in the history of American medical literature. Accustomed from almost the commencement of his professional life to pay peculiar attention to this branch of medical knowledge, the author has produced a work worthy of his high professional standing and the science he has so devotedly cultivated.

This work possesses a considerable fullness in all that concerns the effects of remedies, the nature of their operation, and their therapeutic application, but has no claims to be considered a complete exposition of the *materia medica* proper. It is divided into two parts; first, general therapeutics and pharmacology; and second, special therapeutics and pharmacology. To the consideration of the first part ninety-one pages are devoted, and one thousand six hundred and fifty pages to the second. The perusal which we have given this treatise has satisfied us that we can justly recommend it to all classes of our readers, and particularly to the younger portion of the profession.

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ART. XI.—*Physical Exploration and Diagnosis of Diseases affecting the Respiratory Organs*. By AUSTIN FLINT, M.D., Professor of Theory and Practice of Medicine in the University of Louisville; etc. Philadelphia: Blanchard & Lea. 1856. 8vo. pp. 636.

THIS volume belongs to a class of works which confer honor upon their authors and enrich the domain of practical medicine. A cursory examination even will satisfy the scientific physician that Dr. Flint in this treatise has added to medical literature a work based upon original observation, and possessing no ordinary merit. The volume is divided into two parts. In the first, he treats of *Physical Exploration of the Chest*; and in the second, of the *Diagnosis of Diseases Affecting the Respiratory Organs*. The various topics discussed in the work are considered with almost exclusive reference to their direct clinical bearings.



ART. XII.—*The History, Diagnosis, and Treatment of the Fevers of the United States.* By ELISHA BARTLETT, M.D. Late Professor of Materia Medica and Medical Jurisprudence in the College of Physicians and Surgeons of the University of the State of New York, etc., etc. Fourth edition, revised by A. CLARK, M.D., Professor of Pathology and Practical Medicine in the College of Physicians and Surgeons of the University of the State of New York. Philadelphia: Blanchard & Lea. 1856. 8vo. pp.

THE work of Dr. Bartlett, on the fevers of the United States has, from the issue of the first edition to the present, been a standard work with the profession. Aside from the character which the author's reputation would give to a work on any branch of practical medicine, this treatise has merits of a high order. It is in truth a model of classical diction, accurate investigation, and logical deduction. The three former editions passed under the hand of the author, each of which received from him a most judicious revision, and many additions.

The fourth edition has been supervised by his intimate friend and colleague, PROF. CLARK, of this City, whose relation to the author, and ample clinical experience, eminently qualified him for the task. The following extract from the editor's preface is a pleasing and elegant tribute to the memory of the lamented author:—"Sixteen months ago, he closed his brilliant professional career, after years of growing bodily weakness and pain; his mind not dimmed by his physical infirmities, but bright and comprehensive, glowing with the memories of the past, and the visions of the future. He died too soon for the profession he adorned. The clock had hardly marked twelve-at-noon, on the dial plate of life, when its pendulum strokes grew faint, and gradually fainter to the ear; and now, at length, when all is still, the hand that notes the hours points sadly upward, to indicate how much of day-time still remained to reap the harvest of affection and honor, in those fields, from which he had already garnered up so many golden sheaves. He died, alas! too soon. The whole profession are his mourners; for conspicuous as he had become by his medical writings, and his extended professional labors; his acknowledged worthiness, and his innate gentleness and modesty disarmed envy. He left no enemies. His mind and purpose were pure, almost beyond example. His high mental endowments were controlled and directed by a considerate judgment, and an earnest benevolent heart; and as the laws of refraction, wrought out into mathematical formulæ, enable the lapidary to construct the facets which open the fountains of the many colored diamond, so for him, cultivation and elegant taste had brought out the varied and winning native lights of his rich intellectual, moral, and social nature."

The present edition of Dr. Bartlett's work derives importance over its predecessors from the notes of the editor. From a somewhat cursory examination of the volume, we find these additions are numerous, and well designed to present the opinions of recent writers and their investigations of each individual subject. In addition to the results



of literary research, we have interspersed through the work, what will be more generally sought after, viz. : the editor's own views and experience upon many of the disputed points discussed by the author. The work as now improved, does honor to the medical literature of this country.

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ART. XIII.—*Atlas of Cutaneous Diseases.* By J. MOORE NELIGAN, M.D., Lecturer on the Practice of Medicine in the Dublin School of Medicine. Philadelphia : Blanchard and Lea. 1856.

THIS atlas is designed as an accompaniment to Dr. Neligan's work on the diseases of the skin. The illustrations are very fairly executed, and the atlas presents, in a convenient and cheap form, every variety of cutaneous disease.

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ART. XIV.—*Obstetrics: The Science and Art.* By CHARLES D. MEIGS, M.D. Third edition, revised; with one hundred and twenty-nine illustrations. Philadelphia : Blanchard and Lea. 1856.

IN a cursory examination of this edition of Dr. Meig's work on Obstetrics, we notice that all late improvements in that branch are incorporated in its text. The general merits of this treatise are too well known to require acknowledgment at our hands.

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ART. XV.—*The Dissector's Manual of Practical and Surgical Anatomy.* By ERASMUS WILSON, F.R.S. The third edition from the last and revised London edition. Illustrated with one hundred and fifty-four wood engravings. Edited by WILLIAM HUNT, M.D., Demonstrator of Anatomy in the University of Pennsylvania. Philadelphia : Blanchard & Lea. 1856.

THIS manual, we believe, is the most popular in use among students engaged in dissecting. It is convenient in form, while its arrangement, being for the most part that of Mr. Wilson's large work, now so generally studied, peculiarly adapts it to the student's necessities.

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ART. XVI.—*Practical Anatomy. A new arrangement of the London Dissector, with numerous modifications and additions, containing a concise description of the Muscles, Bloodvessels, Nerves, Viscera, and Ligaments of the Human body, as they appear on dissection.* With illustrations. By D. HAYNES AGNEW, M.D., Lecturer on Anatomy, R.R. Philadelphia : J. B. Lippincott & Co. 1856.

THIS work has been prepared expressly for the student of Anatomy while engaged in dissection. It is a very convenient manual, and by its arrangement, is well adapted to the study of practical anatomy.

## PART THIRD.

### MEDICAL RETROSPECT AND EDITORIAL.

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#### PRACTICAL MEDICINE.

*Iodoform*.—A new preparation of iodine, discovered by SEVILLAS and more especially brought to notice by M. M. DUMAS and BOUCHARDAT, possesses properties which promise to make it a valuable addition to our means of employing, with benefit, this important therapeutic agent. It presents itself in a solid state, in the form of small pearly particles, of a sulphur-yellow color, friable, soft to the touch, and with a very enduring aromatic odor. It contains more than nine-tenths of its weight of iodine. It is sweet to the taste, and is not corrosive.

It destroys animals in a smaller dose than iodine, after having produced more or less depression, and rarely produce vomiting. This depression is followed by a stage of excitement, convulsions, contractions, etc. Iodoform does not produce the least local irritation, not producing the slightest increase of vascularity of the mucous membrane of the stomach and bowels.

Its therapeutic properties are thus arranged: 1. In consequence of the large quantity of iodine which it contains, it can replace iodine and the iodides in all the cases in which these are indicated. 2. It is absorbed with the greatest facility. 3. It has the advantage over all other preparations of iodine of never causing any local irritation, or any of those accidents which render the suspension of iodine necessary in certain cases. 4. In addition to the properties it enjoys in common with iodine, it has advantages peculiar to itself: it allays pain in certain neuralgic affections, and produces a sort of local and partial anæsthesia of the rectum, when introduced into that organ. 5. It may be given in doses of from five to fifty centigrammes a day. 6. The principal diseases in which it has been employed with advantage are endemic goitre, scrofula, rachitis, syphilis, certain affections of the neck of the bladder, or of the prostate, and certain neuralgic affections. 7. It forms, with the greatest facility, most important pharmaceutic preparations.—*Arch. Gen. de Méd.*

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*Secondary Syphilis Treated by a New Preparation of Iodine*.—The object of the paper by Mr. CHRISTOPHERS is to introduce to notice a new compound, which, combining the good effects to be derived from iodine, is devoid of its disadvantages—a preparation which, he says, has proved valuable in curing cases of secondary syphilis which had previously resisted the beneficial action of iodine in all its usual com-

binations and forms—a preparation, moreover, which does not produce the evil effects of iodine in those constitutions with which that substance is known to disagree. The preparation or compound is named “liquor cinchonæ hydriodatus,” and contains in one fluid drachm of liquor, twelve grains of cinchonæ flav., and one grain and a half of iodine, in the form of hydriodic acid. Of this, the dose varies from one to three drachms, from which Dr. C. has not found any of the evil effects arise which smaller doses of other preparations of iodine have been known to produce. While using this compound in some of the successful cases treated, he also employed the hot-air bath, to which he attached much importance, in order to produce profuse sweating, and always with marked good effect. Indeed, he says he does not know a more potent remedy for intractable and inveterate cases of secondary syphilis than this is. This preparation is produced by exhausting the powdered bark with an aqueous solution of hydriodic acid; then with water; and the liquor is subsequently evaporated to the above bulk.—*Lancet*.

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*Effect of Belladonna in Arresting the Secretion of Milk.*—DR. GOOLDENS relates the following cases:—E. J., æt. 28, was admitted into St. Thomas' Hospital, with severe rheumatic fever, at the time she was nursing a child four months old, which was not allowed to remain with her. On the following day, although she had been freely purged, the breasts had become tumid, hard, painful, knotty, and extremely tender. The superficial veins were distended; some milk had been drawn, but the process was attended with great pain, and Dr. G. could not listen to the heart's sounds on account of the tenderness. The extract of belladonna was now applied over the areolæ of the breasts, in the same way that it is used to dilate the pupil of the eye. On the following day, Dr. G. found the breasts free from pain, and soft, and the secretion of milk arrested. In another case, in which the mother had weaned the child, the breasts became tumid, painful, and distended with milk. The extract of belladonna was applied to the areolæ, and in two hours she was perfectly relieved, and the milk absorbed.—*Lancet*.

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*Structure and Nature of the so-called Colloid Cancer.*—In a paper recently communicated to the Royal Medical and Chirurgical Society of London, by DR. SEPTIMUS W. SIBLEY, containing an analysis of nine cases of colloid cancer, observed by him, he draws the conclusion, that, so far as could be judged from the cases detailed by him, colloid was a disease perfectly *sui generis*, neither of a cancerous nature, nor frequently associated with cancer, and concludes with advocating the early removal of the disease when practicable, inasmuch as, if not radically cured by operation, there was abundant evidence that colloid was sure to return after excision.

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*Disease Peculiar to Workmen in Caoutchouc.*—M. DELPECH has lately called the attention of the French Academy of Medicine to a



peculiar disease of the workmen in caoutchouc, which has never been before described. The inhalation of the vapor of the sulphurate of carbon causes in them different forms of derangement of the digestive organs; a marked modification of intelligence, dullness, loss of memory, etc.; serious alteration of the functions of the nervous system, head-ache, vertigo, disordered sensations, more or less complete paralysis of motion, and especially almost perfect impotence.

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*Average Duration of Life in Patients with Scirrhus Cancer of the Breast.*—MR. PAGET deduces from the statistics of one hundred and thirty-nine cases of scirrhus cancer of the breast, watched to their conclusions, or to their survivals beyond the average duration, and recently published in the *London Lancet*, that the proportion of deaths, in the first two years of the disease, is much less in those who are operated on than in those who are left; amounting in the former to less than eleven per cent., in the latter to more than thirty per cent.; more careful observations and a larger range of cases has led him to correct the statements made on this subject in his *Lectures on Surgical Pathology*, published in 1853.

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*Influence of Vaccination on the Rate of Mortality.*—It will be remembered that vaccination, within a few years past, has been charged with increasing the mortality in France. It is asserted by the advocates of this new doctrine that, since the last century, the mortality in France, between the twentieth and thirtieth years, is doubled, and that this increase in the number of deaths is owing to the greater prevalence and fatality of *typhoid fevers*—that vaccination only spares life to make more food for that form of fever. Statistics, however, show that the general mortality in France, between the twentieth and thirtieth years, far from having doubled, or even increased, has, not only at that period, but at all ages, diminished since the eighteenth century.

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#### SURGERY.

*Two cases of Excision of the Knee Joint which terminated fatally.*

Case 1.—G. P., æt. 18, was admitted into St. George's Hospital, November 14, 1855, under the care of Mr. Tatum, on account of strumous disease of the knee. The treatment which was adopted not affording him any material benefit, and his general health beginning to fail, it was determined to try the operation of excision. On the first of last May an H shaped incision was made: the patella was turned up in the upper flaps, but not removed, as it seemed healthy. About half an inch in thickness of the end of the femur, and rather more of the tibia, was sawn off. The parts were reunited by sutures, and the limb put upon a ham-splint. The synovial membrane was found greatly thickened, the joint disorganized by suppuration in its cavity, the bones, partially denuded of their cartilages and unnaturally vascular, (especially



the tibia) but healthy, where cut through. Considerable typhoid fever and great pain in the part followed the operation; the discharge was very profuse, and union did not proceed very satisfactorily; the granulations were pale, the matter curdy and offensive. On the fourteenth day he had a slight rigor, and complained of pain in the sound leg and a little cough. The symptoms of secondary suppuration, soon became confirmed, and he died on the seventeenth day.

*Case 2.*—R. D., æt. 15, was admitted January, 1856, under the care of Mr. Cutler, for chronic synovitis of the left knee. There was much heat of the part, great swelling of the synovial membrane, which a large quantity of fluid, and extreme tenderness on pressure. An incision was made which gave vent to a large quantity of serous pus, but it was not followed by any permanent benefit; and as the patient's health was failing, it was resolved to expose the cavity of the joint freely, and remove the diseased bone. On the 17th April, a curved incision was made, running parallel to lower border of the patella, which bone was turned back and the joint exposed; the diseased portion of the bones were removed. No symptoms followed the operation, which seemed to give complete relief from the pain in the knee. The swelling, however, did not subside, and the discharge showed no tendency to cease. The boy remained in the hospital two months, and as he was losing flesh, he left and went to the sea-side. Gradually getting worse, he returned to London, and a month subsequently he died.—*Association Med. Jour.*

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*Hæmorrhoidal Tumor Removed by the Écraseur of Chassaignac.* By H. TERRY, Esq., Surgeon to Northampton Infirmary.—The patient had for several years suffered from a large and painful hæmorrhoidal tumor: it was about the size of a hen's egg, covered with condensed mucous membrane and cellular tissue, and disposed to bleed. Previous to the receipt of the *écraseur*, an attempt was made to strangulate the tumor by applying a tightly drawn ligature: this was followed by excessive pain and fearful general collapse, so much so, that large doses of opium and brandy had to be administered. This operation not succeeding, a second was performed nine days afterwards, which was likewise followed by severe pain, but no collapse. In a few days a portion of the tumor came away, leaving the largest part behind. The *écraseur* had now arrived, and I determined upon attempting to finish the case by its application. Chloroform having been given, the tumor—about the size of a nutmeg—was drawn out by its ligature, and the chain put round its neck; the chain was drawn down till it was in close contact with the part, when the ratchet action of the instrument was begun, tightening the chain by one notch every fifteen seconds. In two minutes and a half—i.e. by ten actions of this most ingenious contrivance—the tumor came off. There was hardly a drop of blood, and a small, clear, healing surface remained; the patient having no pain. He was able to get up the next morning.—*Assoc. Med. Jour.*

*Obstetric Selections.* By GEORGE T. ELLIOT, JR., M.D.

*Nymphomania*:—M. TABER (Württemberg *Med. Corresp. Blatt*) reports the following interesting details:—"The patient was forty-eight years of age, the mother of many children, and, for the last twenty years of her life, in widowhood. From her youth, she was addicted to onanism. The ergot of rye had given more relief than any other treatment, at the rate of 3 ij. in the twenty-four hours. Her sexual desires ceased thirty-six hours before death. On *post-mortem* examination, the body was found much atrophied; between the corpus callosum and the tubercular quadrigemina; a hydatid, as large as a nut, was found closely attached to the choroid plexus. Tubular structure of the kidneys much congested. Uterus enlarged, with indurated cervix, and very patulous os. Vagina smooth, and parchment-like. Ovaries healthy.—*Revue de Thér. Med. Chir.*, October."

*Puerperal Tetanus*.—In the three years, ending December 1853, no less than two hundred and thirty-two women are recorded as having perished from this disease in Bombay; and it would appear as if it had been on the increase, as from thirty-eight deaths from this disease, in 1851, we rise to eighty-seven in 1852, and one hundred and eight in 1853. A considerable increase of the mortality took place towards the close of the rains, thirty per cent. of the number dying in the last three months of the monsoons, (August, September, and October,) while in the three months immediately preceding the setting in of the rains, (February, March, and April,) only fifteen per cent. of the deaths occurred. Dividing the year into the two seasons—wet and dry—the proportions stand thus: Wet season, (May to October inclusive,) one hundred and twenty-seven deaths, or 54.4 per cent. Dry season, (November to April inclusive,) one hundred and six deaths, or 45.5 per cent.

During the same period, the number of deaths by puerperal fever were twenty-one; by puerperal convulsions, two; by phlegmasia dolens, one.

It appears that the liability to tetanus, greatly diminishes after the sixth day, though it continues up to the eighteenth day after delivery. The number dying during the first six days amounting to one hundred and forty-five, leaving only eighty-eight to be distributed over the remaining twelve days. During these three years, six deaths of trismus nascentium are recorded.

Excluding the puerperal form of tetanus, it appears that there still remain nine hundred and twelve deaths from this disease out of forty-two thousand six hundred and fifty-one deaths in the town of Bombay, or one from tetanus to forty-six from all other cases.—*Brit. and For. Med. Chir. Rev.*, October. p. 558.

*Cases of Nymphomania.* By HORATIO R. STORER, M.D., Physician to the Boston Lying-in Hospital.—*Am. Jour. of Med. Sciences*, October, 1856.

*Case 1.*—M. M., æt. 20; thick set and excessively plethoric; unmarried; but confined in 1855; no apparent predisposition to disease.

September 20, 1853, she applied to Dr. Salter, with the confession, that, with the aid of a bed wrench, she had forced a cork into her vagina. On the third examination this was removed with much difficulty from its "bed" "a little back of, and in contact with" the os uteri. "Leucorrhœa, which had formerly been profuse, continuing, and there being some symptoms of metritis, she was advised by Dr. Salter to enter the Massachusetts General Hospital," which she did one month after the operation. She was then flowing, but not profusely, had great pain in back, limbs, and head, with both dysuria, and incontinence of urine. Abdomen tympanitic, exquisitely tender on pressure; but pulse only 92, and rather feeble. Left the hospital November, 1853, not relieved, and sought a female friend, by whose advice "instruments" were introduced, which she found herself unable to extract; and December 9th entered Dear Island Hospital, where she was relieved" by Dr. Moriarty, who cured her of pleurisy, and removed three pieces of German silver spoon from her vagina. Left Dear Island Hospital April 8, 1854, and re-entered Massachusetts General Hospital, June 13, with persisting leucorrhœa and dysuria.

August 24. Hair-pin and ordinary pin removed from bladder, by Dr. Bigelow.

September 3. Another hair-pin followed by symptoms of peritonitis.

October 2. Fragment of third hair-pin.

Left November 5, symptoms having abated. Remained under Dr. Bigelow's care for some time subsequently. Confined September, 1855. Came under Dr. Storer's care March 25, 1856, complaining of "cough of three years standing, leucorrhœa, dysmenorrhœa, and dysuria, with constant pricking in region of bladder; thinks she has at times prolapsus uteri; great difficulty in micturition." Vaginal and vesical examination gave no satisfactory results; but cross-examination elicited some statements, which led to a knowledge of the operations performed by Dr. Bigelow. The patient being then etherized, (April 9,) Dr. Dupee removed "a long piece of copper-wire, broken and twisted on itself several times, and seemed to have been imbedded in the anterior wall. The operation was followed by considerable hæmaturia."

April 16. Dr. Storer removed the greater portion of a hair-pin twisted on itself.

April 23. Dr. Dupee removed another fragment of a hair-pin.

April 29. Nothing more could be detected, and patient transferred to Lunatic Asylum.

May 30. The removal of these foreign bodies was effected by ordinary dressing forceps; the cough, leucorrhœa, and dysmenorrhœa had yielded to treatment. The suspected prolapse of uterus was prolapse of the anterior wall of the vagina.

June 21. Re-applied to Dr. Storer for relief for the same pains in the neighborhood of the bladder, but that gentleman declined to assume further responsibility, believing that "merely palliative treatment without restraint would be useless." Clitoris not at all enlarged.



*Case 2.*—Mrs. B., æt. 24; under size; gross habit; pale and pasty complexion; in easy circumstances; married at 17; no children; has never miscarried; in tolerably good health; menstruates regularly, but scantily, and with some difficulty; trifling leucorrhœa. "For several months has been troubled by bad dreams, excessively lascivious in their character; can hardly meet or converse with a gentleman, but that next night fancies she has intercourse with him; has frequently such thoughts by day, sometimes when in conversation; thinks that she would at once repel an improper advance on part of any man, and is not conscious of ever having shown to any such what was passing in her mind; is much afraid that, if further increase of malady, may not be able to restrain herself; at such times is conscious of a spasm within genitals, and of the emission of a mucous jet, one or more drops, which stains linen; this emission did not occur at first, but now always takes place; does not think that her husband has missed having connection with her a single night since her marriage, even at times of menstruation—frequently three times in a night, and always with a seminal emission." Has always lived well herself, meat three times each day, brandy at dinner; enjoys intercourse greatly; is conscious of most excessive local excitement; thinks that present excess arose from desire for children; has never masturbated; is sure that, if her husband should restrain herself, she could not keep from him; has tried it. Examination disclosed no facts bearing on the disease, but excessive irritability in the neighborhood of the clitoris, "gentle touch causing her to shriek out, not with pain, as she herself said, but with excitement; acknowledges constant itching in that region." Total abstinence from sexual intercourse ordered, with unstimulating diet, cold baths and enemata; solution of borax to anterior commissure; hair pillows and mattress in place of feathers; 3ij doses nightly of equal parts of tr. of val. hyos. and lupulin. ferri sacch. carb. gr. jss, ter in die. A month later, she had passed several days without the dreams or the emissions, and with much diminution of the local heat and irritation.

[We were told by a physician in Paris, that he was once required to make a speculum examination of a sister of charity; when he noticed a distinct jet to occur at the moment when he was about to introduce the instrument. Some months subsequently he was again desired to repeat the examination, when, anticipating the phenomenon, he watched attentively, and witnessed it for the second time. He had no doubt, that it came from one vulvo-vaginal gland.—G. T. E., JR.]

*Sterility.*—*New Orleans Med. News and Hosp. Gazette*, September.—A negro woman, æt. about 30; married at 17; had never been pregnant, and had exhausted her physician's routine of practice. Directed to allow a newly born infant to be applied to her own nipples. This was faithfully done for four days; and about nine months subsequently the woman gave birth to a "fine, full-termed girl child."

*Tincture of Iodine in the Vomiting of Pregnancy.*—*Preuss. Ver. Zeitung.*—As quoted in the *Edinb. Med. Jour.*, October. p. 368.—Dr.



Eulenberg, of Koblenz, says that this remedy, even in very small doses, is a most efficacious agent in arresting the troublesome vomiting which so often occurs in pregnant woman. He orders the tincture in a very dilute form (tr. iodine ℥j., spts. vini. rectif. ʒiij.) and small doses, three drops several times a day in water. The cardialgia accompanying this morbid condition is also relieved by it. Dr. E. alleges that other sympathetic irritations and neuroses of the stomach, are alleviated by similar treatment. He has not found the iodide of potassium as equally serviceable in the affections alluded to.

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*Case of Puerperal Tetanus.—Glasgow Med. Journal, October.*—DR. R. PATERSON reports the details of a case in the person of a woman who had given birth to her fifth child after a natural and easy labor, lasting four and a half hours; July 3, 1855. On the 10th, the Dr. ceased his visits, as her recovery had been uninterruptedly good; and on the 17th he was called to prescribe for uneasiness and rigidity of the muscles of the neck and jaws, ascribed to cold. Ordered ℥j of Dover's powder.

July 18.—More difficulty in opening the mouth. Powder repeated, with liniment of chloroform and laudanum.

July 19.—Worse. Blister to nape of neck; iodide of potassium and morphia—quantities not stated.

July 20.—Tongue cannot be protruded beyond the tip. Great difficulty in making herself understood. Can suck beef-tea through her teeth, and then swallow with considerable ease. Turpentine and soap injection; five to eight drops of hydrocyanic acid, with the morphia as before. In the evening, swallowed with some difficulty; bowels not moved. Dr. Pagan called in, who advised a thorough, opiate plan of treatment; to have the injection repeated, and after its operation ʒij of laudanum every three hours by enema.

July 21.—Had intervals of sleep; slight emprosthotonos with pain in præcordium; dorsal muscles tense. ʒiij of laudanum as before. In the evening. Has had a few intervals of repose during the day. Other symptoms unchanged, but drowsy, and mutters that she could sleep were it not for the jerking and twitchings. Repeat turpentine enema, and after its operation the laudanum injections as before.

July 22.—Has had occasional short sleeps; feels more comfortable; general rigidity much diminished, notwithstanding a few spasmodic attacks of an opisthotonic character while assuming the sitting posture, which she is now under the necessity of doing when nourishment is administered. Continue treatment.

July 23.—Better to-day; some hours sleep; spasms by no means so frequent, and rigidity diminished; can take her beef-tea more conveniently. Continue treatment. Evening.—Severe opisthotonos with excruciating pains traversing the whole muscular system; breathing laborious; abdomen much distended, and hard as a board; spine describes a curve, and tendons of all the flexor muscles like tense whipcords; much exhausted; has perspired immeasurably; and, as intelligibly as possible, communicates that her thirst is distressing; every attempt to swallow increases spasm—this attack came on while attempt-

ing to assume the sitting posture for a change of position. Wine and any nourishing fluid; laudanum enemata increased to four teaspoonfuls every three hours.

July 24.—Ten A.M.—Symptoms not improved; injections not well retained; has had several severe spasms; tongue lacerated; spine still arched; abdomen protruberant and tense; nurse says that during some attacks the occiput and heels were the only supporting points of the body; respiration more free. Two grains of morphia in suppository every four hours. Half-past two P.M.—Spasms less severe; spine less arched; abdomen less tense and protruberant; complains most of tightness and rigidity of arms and legs, the tendons of which, even to fingers, are at present fixed. Suppository now, and 3ij of laudanum at seven P.M. in enema. Ten P.M.—No sleep; drowsy; articulates better; easier; spasms less frequent; muscular system more relaxed; præcordial pain, and abdominal uneasiness much abated; Can open the mouth a half inch, and swallows with comparative ease. Suppos. of opium gr. ii now, and the laudanum injection every four hours.

July 25.—Ten A.M.—Better night; speaks with ease, and says that she feels much revived after refreshing sleep; tetanic rigidity almost subsided; has taken much nourishment; thinks that the effects of the enemata are those of the suppositories. Laudanum every five hours. four P.M.—Unusually exhausted; spasm of dorsal muscles on slightest noise; discomfort in deglutition; tympanitic distension of bowels. 3j, tr. foetida 3ij, tr. valerian, to each enema. Eleven P.M.—Fast asleep on her sides; awoke suddenly when touched and had several mild attacks of opisthotonos; nurse states that at seven P.M. there was a general convulsion of frightful character; intellect remaining unimpaired; elevated to the sitting posture with much difficulty, when the stiffness gradually passed away in a few opisthotonic spasms. Suppository as before. Sleep not to be disturbed on any account."

July 26.—Ten A.M.—Slept from half-past eleven P.M. till two A.M., this morning, when a similar paroxysm occurred, but less severe in its character. Slept again for four hours; muscular rigidity generally has much diminished. Intermit suppository, 3ij laudanum every four hours in enema. Ten P.M.—Much better, refreshed; several hours sleep. Continue treatment.

July 27.—Ten A.M.—Several attacks of opisthotonos during the night; diminished in intensity and duration; if anything feels better; turpentine enema, to be followed by the opiate. Eight P.M.—Has had a sharp attack of opisthotonos; at present feels much better, and expresses some confidence in the prospect of recovery; deglutition comparatively easy, and the muscular system, with the exception of the larger tendons of the inferior extremities, in a satisfactory condition; can sit up, and support herself by a cord attached to the bed-post; bowels have been freely moved; 3ij laudanum, as before.

July 28.—Half-past three A.M.—Apprized that Mrs. H. was dead or dying: died before the doctor could arrive. The corpse lay supine, stiff, and arched; the occiput and heels being the points d'afferi. The patient had felt so much better, that after a draught of beef tea at one o'clock, she had requested the nurse to go to sleep; the nurse lay

down beside her and was awakened by a loud gurgling noise, when the messenger was dispatched for the doctor. No *post-mortem* could be obtained.

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*Case of Locked Twins, in which both children were born alive.* Communicated to the Edinburgh Obstetrical Society, by JAMES B. BALFOUR, M.D.—On the 18th March, 1854, I was called upon to visit M. M., æt. 30 years, in her second pregnancy. I reached the house about five A.M., and found that the membranes had ruptured about two A.M., and since that, labor had gone on strongly and steadily; and, shortly before I came, I was told that something had begun to protrude, external to the vagina, which, upon examination, I found to be both feet of a child which were already in the world. A few pains brought down the lower part of the body, when suddenly, and unaccountably, the progress of the child's birth was arrested. The child was coming with its abdomen presenting towards the sacrum of the mother. On finding its progress stopped, I made an examination, and found the head of a second child, filling the pelvic cavity, with the occiput occupying the hollow of the sacrum, and the face resting on the upper part of the chest and the neck of the first one, the chin being just below and in apposition with the chin of the first child, which remained at the brim of the pelvic, being thus prevented entering the cavity. Happening to have my short forceps with me, I immediately applied them to the head of the second child; and, while using them, I employed slight traction on the first child, by grasping it by the legs, which I drew slightly forward. Without much difficulty, I succeeded in abstracting the head of the second child; and, in doing so, the head of the first descended into the cavity of the pelvis, again locking them in a similar position to what they were at first, only that now it was the head of the first which prevented the body of the second from descending. I now held the head of the second child as well back as possible, and having grasped the limbs of the first, I exerted gentle traction, and the head very quickly glided beneath the arch of the pubis, and the child was born, after which the second was easily and quickly delivered. They were both female, and appeared to be fine healthy children, but they were decidedly below the average size of twins, and I was inclined to think they were a few weeks premature. Both did well, and were in good health when I ceased attendance.—*Edinburgh Med. Jour.*, Sept.

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CORRESPONDENCE.

FONTAINEBLEAU, September 1, 1856.

Editors of *New York Journal of Medicine*.

DEAR SIR :—For six weeks past I have made frequent visits in the hospitals of the environs, extending some thirty miles around Paris, more particularly at Montes, St. Germain, Versailles, Melun, Montereau, and Fontainebleau.

One cannot desire a more hearty welcome than that offered in these



institutions to the voyaging physician. The usual medical and surgical service is from seven to nine in the morning. At St. Germain were made the first applications of the apparatus invented by Dr. Martin, of Paris, for the treatment of fractures of the thigh, by which extension and counter-extension are secured from the calf of the leg and the hip, reposing on cushioned pads. This apparatus is similar in principle to that manufactured by H. H. Mason, of Springfield, Vt., (of which I am sorry to have forgotten the name of the inventor,) but in its details somewhat different. I hope you may soon see their comparative application at the New York Hospitals, that an apparatus, so good in principle, may embrace every desirable modification.

During the last days of July there were frequent cases of insolation; some of which occurred among the soldiers recently from the camp of Boulogne, a part of the army of the North, under Baraguay d'Hilliers. This detachment arrived at Paris by railroad, and thence marched, July 31, for Poissy; and when near St. Germain, several fell senseless; six of whom were borne to the hospital. These were all treated by general venesection, leeches to the back of the neck, ice to the head, sinapisms to the extremities, lemonade diet, aperient lavement; and after seven days of repose, four left the hospital the morning of my last visit, when the remaining two were convalescent.

At St. Germain, the civil and military hospitals are united; but at Versailles, these form two separate establishments: the military being near the palace in a building formerly known as the "*Grand Commun*," containing one thousand rooms, in which no fewer than three thousand persons were lodged when the court resided at Versailles." Of course the interior has been somewhat changed to suit its present use.

The civil hospital is ample; but that which especially attracts the attention of the visitor, is the splendor of the rooms appropriated to pharmaceutical purposes. And, in this connection, he can but regret that so little has been done to facilitate the proper ventilation of the wards of the sick.

Among the patients of the greatest interest were three or four cases of the successful application of electricity, for the cure of paralysis.

For about two weeks I have been at Fontainebleau, a city containing eight thousand five hundred inhabitants, and surrounded by a forest, some twelve miles in diameter, producing almost every variety of trees of the temperate zone, diversified with mountain ridges, gorges, valleys, and plains, and presenting to the thousands of enchanted visitors, picturesque, wild, and romantic views, which, if they have not the awful grandeur and sublimity of our *Adirondac Gorge* and *Tehawian Heights*, do, by their access and proximity to gardens, parks, terraces, and parterres of exquisite beauty, form an animating contrast, which, with the good air, water, milk, unpressed chasselas, and other essentials found here, fortify soul and body. At a little removed from the city, and very near this forest, is located one of the most inviting hospitals yet visited, whose administration, surgeons and physicians, by their welcome reception and polite attentions, add not a little to render the stranger's visit agreeable and profitable.

There might be mentioned several cases of contusions and other



wounds, of which the cures are at once honorable to surgery, and illustrative of the benefits of good air in the treatment of disease.

Yours truly,

DAVID P. HOLTON.

SUBSTITUTE FOR COD-LIVER OIL.

NEW YORK, NOV. 26, 1856.

To the Editors of the *New York Journal of Medicine*:

GENTLEMEN:—I wish to direct attention to the oily substance taken from the cavities in the head of the spermaceti whale, known in commerce as the head-matter. In summer, it presents the appearance of oil with a copious white fleecy sediment; but in winter, when chilled, resembles imperfectly frozen ice-cream or beef-drippings. It may be obtained from the manufacturers of sperm candles, and should be used while fresh (in its crude state as landed from ship-board), becoming rancid by long keeping. Ol. ethal would be an appropriate name for this substance as being composed mostly of oils and ethal, the peculiar base of spermaceti. "The spermaceti itself consists of two atoms of margaric acid, one atom of oleic acid, and three atoms of ethal. The ethal is remarkable for its analogy, in composition and properties, to the bodies of the alcohol group."—KANE'S *Chemistry*.

It is preferable to the cod-liver oil, on account of being more agreeable to the taste, leaving a pleasant flavor in the mouth, and also being more nutritive and soothing. It is also less apt to disagree with the stomach, and does not cause offensive eructations. The patient may take it either pure, in coffee, or with bread, boiled rice, potatoes, etc. When required, tr. opii camph. and syr. ferri iod. may be added.

Yours respectfully,

G. P. CAMMANN.

MESSRS. EDITORS.—Will you publish the accompanying card in the *New York Journal of Medicine*, and oblige,

Yours respectfully,

G. P. CAMMANN.

A CARD.—*The Double Self-adjusting Stethoscope*.—Being informed that Dr. Marsh, of Cincinnati, complains of my having infringed the patent of his double stethoscope, I would state that,

1. Dr. Marsh's instrument and mine differ essentially one from the other both in principle and construction.

2. I wholly disclaim any intention of interfering with the rights and interests of Dr. Marsh. I have never received any advantage from the sale of my stethoscope, but presented it free to the profession. Dr. Marsh has remained perfectly quiet for two years from the first appearance of the double self-adjusting stethoscope, and now, when the period has elapsed within which I might have secured myself by patent, if so inclined, his aim and endeavor seem to be not to dispose of his *original patented instrument*, but to avail himself of mine with all its *improvements and adaptation to practical purposes*. Is the

Profession, then, prepared, on the *ipse dixit* of Dr. Marsh, to sustain him in the sale of my stethoscope under restrictions, when he has not taken the usual course to establish his legal right so to do. He certainly cannot acquire the moral right to receive the benefit of other men's labors.

3. Dr. Marsh's stethoscope appears to be but a modification of other instruments long known in Europe and now in my possession.

The above statement, including the opinion that my stethoscope is not an infringement of Dr. Marsh's patent, is made under advice of eminent counsel.

G. P. CAMMANN.

NEW YORK, Dec. 2, 1856.

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BELLEVUE HOSPITAL, Dec. 13, 1856.

Editors of the *New York Journal of Medicine*.

By request of DR. JAMES R. WOOD, I desire to correct a statement in regard to a case, which I reported from his service, in your Journal for September. The case was malignant disease of the right superior maxilla, which Dr. Wood treated by applying a ligature to the right common carotid. The operation proved very successful, the tumor gradually subsided until nearly all external evidences of disease had disappeared. In my report, which was made in Dr. Wood's absence, it was stated inadvertently that the cure was complete. The patient was discharged in the early part of September; the face being quite free from disfigurement. He was readmitted; the tumor having again made its appearance; the collateral circulation being partially established. At the present time, the tumor is gradually increasing, although it is not nearly as prominent as before the operation. Dr. Wood is about to ligate his left common carotid, the result of which will be given.

Very respectfully,

FRANCIS V. WHITE, M.D.

House Surgeon to Bellevue Hospital.

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*Case of supposed Poisoning.*—On Friday, July 3, 1856, it was reported that a female, residing at No. 63 King street, was lying dangerously sick, from the effects of poison administered to her, for the purpose of obtaining a large sum of money which she was supposed to have obtained from a railroad company. One of the lawyers acting as her counsel in the suit against the company being charged with the crime.

She was found in bed partially insensible, but easily aroused, so as to recognize those around her. By signs she intimated that the stomach was the seat of her greatest distress, complaining also of her throat and head; she made several attempts to speak, but could not articulate. The first physician called in administered an emetic, which vomited her freely. A cup was found in the room containing a small quantity of white and brown sediment, which was pronounced to be opium and arsenic. Several physicians being called to see the case,

all were of opinion that the patient was suffering from the effects of poison.

The Coroner was notified to hold an *ante-mortem* examination, as she was reported to be dying. He at once proceeded to the house to take her statement. She gave him to understand that she was poisoned by her counsel, and that he had stolen her papers.

A jury was empaneled to investigate the circumstances of the case. Several witnesses testified to seeing the legal gentleman in the room of Mrs. P., a short time before her illness, the testimony of four medical men was to the effect that Mrs. P. was suffering from the action of an irritant and narcotic poison. In view of the correctness of these statements, the Coroner issued a warrant for the arrest of the legal gentleman, and he was at once committed to prison to await the result of the inquisition.

A portion of the vomited matter, and the contents of the cup containing the supposed poison, were sent to me for examination, with a request that I would testify in the case at ten o'clock the next morning.

A careful chemical analysis failed to determine the presence of either arsenic or opium; the brown and white powder proved to be jalap and bitart. potass., which had been administered to Mrs. P., by the legal gentleman, at the request of an old man who was called in to see the lady when she was first taken ill.

My testimony before the Coroner was, that no poison could be discovered in the several substances placed in my hands for examination; that Mrs. P. was probably suffering from congestion of the brain; and the distress in the throat and stomach was due to the free use of emetics administered by the medical attendants, with a view to empty the stomach.

The case was then submitted to the jury, and five were for a conviction, and one for an acquittal (six constituting a coroner's jury).

As several hours had elapsed without any prospect of the jury agreeing, the coroner discharged them, giving notice that he would empanel a second jury in the morning. The next day the inquisition was resumed at the Eight Ward Station House, the excitement in the neighborhood being kept up by constant visitors, both to see Mrs. P., and also to see the accused.

A careful consideration of the case by an intelligent jury, at once decided that there was no poisoning in the case; that the gentleman charged with the crime had visited Mrs. P. with no intention of doing her harm; that they gave her some medicine while she was partially stupid from congestion of the brain; that this proved to be pulv. jalapa. comp., which the other medical attendants mistook for arsenic and opium. They were at once discharged from custody, being confined forty-eight hours by the negligence of medical men, in believing the statements of persons who suspected poisoning without using their judgment in comparing the symptoms with the history of the case. Mrs. P. recovered completely in a few days, she still believes that the pulv. jalapa. comp. is a severe poison, and that she was very near dying by it.

Coroners' inquests are frequently held in cases where parties have



been charged with the administration of poison, and in almost every case, it turns out that the deceased came to his death by natural causes. Medical men should be carefully on their guard, and not let the statements of interested parties influence them in forming an opinion of a case, although they may not be able to get any other account of the probable illness of the patient at the time of their visit. The case before us illustrates the importance of attending to this point, for if any of the medical gentlemen in Mrs. P's case had considered for a moment, they would have readily detected the absence of several conditions that indicate the actions of poison, either of the irritant or narcotic variety.

T. C. FINNELL, M.D.,

*Surgeon to St. Vincent's Hospital.*

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MISCELLANEA.

*Bellevue Hospital as a Clinical School.*—The location of Bellevue Hospital in the immediate vicinity of the medical schools of our city, and the facilities which are afforded to students, for acquiring practical knowledge of disease, are attracting to its wards an unusual number of students. During the present session, three hundred and seventy-six tickets of admission have been issued, and not unfrequently its large theatres are filled to overflowing.

In addition to the usual daily clinical instruction, Dr. J. R. Wood is giving a course of lectures on Surgical Anatomy and operative surgery, in the new Pathological Building, which is largely attended.

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DR. G. C. E. WEBER.—We are pleased to learn that GUSTAV C. E. WEBER, M.D., of this city, has been appointed Professor of Surgery in the Cleveland Medical College (O.), in place of Professor ACKLEY. Dr. Weber is son of the eminent German Anatomist of that name. The rare advantages which he has enjoyed for acquiring a knowledge of his profession were not allowed to pass unimproved, as his occasional contributions to this journal abundantly prove. He was in the enjoyment of a large practice in this city, and was justly esteemed one of our most promising surgeons. He will prove a valuable accession to the Cleveland school.

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DR. BROWN-SÈQUARD.—This distinguished physiologist has recently given in the University Medical College of this city three lectures on some of his recent researches in physiology, and more especially on some new views touching that interesting subject the Supra-renal Capsules. We are happy to hear that Dr. Brown-Séquard was welcomed by a large class.

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*Prizes for Anatomical Preparations.*—We desire to call attention to the fact that DR. JAMES R. WOOD has offered to the students of the three medical colleges of this city, two premiums, one of \$50, and the other of \$25, for the two best anatomical preparations, prepared and presented by them to the Museum of Bellevue Hospital. The



decision on the merits of the several preparations is to be made by the respective surgical and anatomical professors of the colleges, and a suitable testimonial to the successful competitors is to be given signed by said professors.

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*A New Work on Ethnology.*—We have received the prospectus of a new work on Ethnology, by JOHN McELHERAN, Member of the Royal College of Surgeons, Edinburgh. Mr. McElheran has been pursuing his researches in this country for several years, finding in the mixture of races which our population presents, unusual facilities in the prosecution of his enterprise. From the exposition of his views, and the results of his investigations which we have learned from the author's lectures and papers, we believe that this volume will excite a general interest among scientific men.

The first edition will be published by subscription. Price \$5, quarto form. Subscribers will remit to D. Appleton & Co., Broadway.

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*Medical Schools and Profession in America.*—We take pleasure in presenting our readers with the following notice of Dr. F. CAMPBELL STEWART's discourse before the Medico-Chirurgical Society, of Edinburgh, on the evening of the 2nd of July last :

The business of the evening was the reading of an elaborate paper by Dr. F. Campbell Stewart, of New York, on the medical profession and medical schools in the United States. The paper, which was followed by the Society with marked interest, gave an account of the organization of the profession in America, of its relations with the State, of the medical societies, colleges, and universities, of the hospitals and other medical charities, of the irregular practice and quackery, finally, of the state of medical and surgical practice generally across the Atlantic. Much amusement was excited by the description of the numerous devices adopted by irregular practitioners to attract notice ; and particularly by the narrative of the successive impositions practiced by the so-called "consumption-curers" upon an intelligent victim of that disease, whose case, as given by himself, was detailed by Dr. Stewart. The union of high intellectual qualities, and particularly of an aptitude for metaphysical research, with the weakness which render men the ready victims of quackery, was pointed out as receiving abundant illustration in the United States. The certificates of the clergy are everywhere sought as the best introduction to practice, and their services are often rendered on far too easy terms, to the propagation of the grossest forms of imposture. Dr. Stewart, however, expressed his opinion that, on both sides of the Atlantic, the best portion of the clergy maintained the most friendly relations with the corresponding portion of the sister profession. The details given of the vast establishments connected with the superintendence of emigration were of the most interesting character ; and the entire paper was undoubtedly calculated to convey most favorable impressions as to the growing intelligence, the rapidly increasing organization, and

the high moral and educational status of the profession, especially in the public services of the United States. Dr. Stewart concluded with an interesting account of the chief professional labors of the oldest and most distinguished of living American surgeons, Dr. Valentine Mott, of New York, who, though upwards of seventy, still continues to perform operations of the most daring and successful character, and to maintain thereby a reputation which is not less than world-wide.

On the motion of Dr. ANDREW WOOD, President of the Royal College of Surgeons, seconded by Dr. CHARLES WILSON, a hearty and unanimous vote of thanks was accorded to Dr. Stewart for his paper.

*Western Lancet.*—With the commencement of this year, our old colaborate, Dr. GEO. C. BLACKMAN, becomes the sole editor and proprietor of this long-established Journal. We wish him all success in his new field of labor.

*Medical Examiner* (Philadelphia).—We perceive, in the December number of this Journal, that its worthy editor, Dr. HOLLINGSWORTH, gives his valedictory, and announces the cessation of that work as an independent journal—arrangements having been effected by the publishers, Messrs. Lindsay & Blakiston, with Drs. Gross and Richardson, for the union of the *Louisville Review and Medical Examiner*, and the establishment thereby of a new journal, to be called the *North American Medico-Chirurgical Review*. We cordially wish the new enterprise success.

*Weekly Comparison of the Weather and Deaths in the City, continued from the November Number.*

| Weeks in 1856. | Mean temperature. | Evaporation below. | Mean daily ranges. | Days mostly clear. | Days of easterly wind. | Days of westerly wind. | Rain—inches. | Mean light barometer. | Mean weight, vapor in a cubic foot of air. | Additional to saturate | Total number deaths. | Children. | Under two years. | Foreign nativity. | Brain and nerv. syst. | Lungs and throat. | Digestive system. |
|----------------|-------------------|--------------------|--------------------|--------------------|------------------------|------------------------|--------------|-----------------------|--------------------------------------------|------------------------|----------------------|-----------|------------------|-------------------|-----------------------|-------------------|-------------------|
|                |                   |                    |                    |                    |                        |                        |              | Inches.               | Grs.                                       | Grs.                   |                      |           |                  |                   |                       |                   |                   |
| 44th           | 46                | 81                 | 17                 | 21                 | 11                     | 51                     | .3           | 29.91                 | 2.09                                       | 1.90                   | 401                  | 247       | 171              | 125               | 72                    | 102               | 163               |
| 45th           | 50                | 8                  | 14                 | 4                  | 13                     | 5                      | .8           | 30.00                 | 2.33                                       | 2.20                   | 358                  | 214       | 151              | 115               | 66                    | 109               | 63                |
| 46th           | 45                | 9                  | 15                 | 5                  | 2                      | 5                      | .0           | 30.04                 | 1.84                                       | 2.16                   | 395                  | 265       | 191              | 106               | 58                    | 130               | 67                |
| 47th           | 42                | 10                 | 18                 | 5                  | 13                     | 6                      | .3           | 29.92                 | 1.46                                       | 2.04                   | 395                  | 250       | 170              | 119               | 65                    | 120               | 79                |
| 48th           | 46                | 7                  | 13                 | 31                 | 2                      | 5                      | .8           | 29.91                 | 2.26                                       | 1.80                   | 410                  | 270       | 184              | 105               | 68                    | 127               | 68                |
| 49th           | 38                | 6                  | 11                 | 3                  | 3                      | 4                      | 1.2          | 29.80                 | 1.84                                       | 1.26                   | 397                  | 255       | 169              | 111               | 76                    | 117               | 53                |
| 50th           | 36                | 8                  | 14                 | 11                 | 11                     | 5                      | .75          | 30.00                 | 1.41                                       | 1.46                   | 442                  | 287       | 179              | 124               | 92                    | 138               | 46                |
| 51st           | 28                | 4                  | 10                 | 4                  | 4                      | 3                      | 1.7          | 30.06                 | 1.44                                       | .81                    | 373                  | 236       | 211              | 114               | 61                    | 134               | 31                |
| 52nd           | 27                | 5                  | 8                  | 3                  | 1                      | 6                      | .0           | 29.75                 | 1.31                                       | .91                    | 407                  | 277       | 191              | 88                | 67                    | 140               | 40                |
| Nov.           |                   |                    |                    |                    |                        |                        |              |                       |                                            |                        |                      |           |                  |                   |                       |                   |                   |
| 1856           | 45½               | 8½                 | 15½                | 18                 | 6½                     | 14                     | 2.1          | 29.89                 | 1.86                                       | 2.16                   | 1719                 | 1091      | 754              | 495               | 288                   | 533               | 307               |
| Nov.           |                   |                    |                    |                    |                        |                        |              |                       |                                            |                        |                      |           |                  |                   |                       |                   |                   |
| 1855           | 45                | 6                  | 11                 | 20                 | 18                     | 12                     | 4.17         | 30.00                 | 2.81                                       | 1.21                   | 1411                 | 924       | 630              | 383               | 255                   | 401               | 234               |

## Neurological Table continued.

| Weeks in 1856. | Still born & premat'r. | Eruptive fevers. | Scarlatina. | Small-pox. | Measles. | Typhus and typhoid fevers. | Other general fevers. | Diarrhoea & Dysent'y. | Croup. | Marasmus. | Apoplexy and congestion of brain. | Hydrocephalus and inflammation of brain. | Convulsions. | Congestion and inflammation of lungs. | Bronchitis and catarrh. | Consumption. | Violent causes. | Burials.          |                 |
|----------------|------------------------|------------------|-------------|------------|----------|----------------------------|-----------------------|-----------------------|--------|-----------|-----------------------------------|------------------------------------------|--------------|---------------------------------------|-------------------------|--------------|-----------------|-------------------|-----------------|
|                |                        |                  |             |            |          |                            |                       |                       |        |           |                                   |                                          |              |                                       |                         |              |                 | Calvary Cemetery. | Potter's Field. |
| 44th           | 32                     | 32               | 20          | 6          | 4        | 9                          | 4                     | 18                    | 9      | 45        | 10                                | 22                                       | 22           | 10                                    | 6                       | 59           | 9               | 180               | 43              |
| 45th           | 39                     | 22               | 12          | 4          | 6        | 10                         | 6                     | 9                     | 9      | 30        | 12                                | 16                                       | 21           | 32                                    | 8                       | 39           | 17              | 151               | 40              |
| 46th           | 42                     | 43               | 26          | 8          | 7        | 8                          | 7                     | 8                     | 17     | 25        | 7                                 | 20                                       | 21           | 27                                    | 6                       | 60           | 11              | 160               | 57              |
| 47th           | 41                     | 39               | 24          | 12         | 3        | 8                          | 5                     | 9                     | 14     | 28        | 17                                | 15                                       | 19           | 27                                    | 12                      | 52           | 9               | 171               | 33              |
| 48th           | 39                     | 45               | 37          | 3          | 2        | 6                          | 7                     | 8                     | 11     | 28        | 13                                | 18                                       | 24           | 35                                    | 9                       | 56           | 15              | 171               | 44              |
| 49th           | 36                     | 56               | 39          | 12         | 4        | 4                          | 4                     | 10                    | 16     | 25        | 14                                | 18                                       | 27           | 31                                    | 7                       | 46           | 12              | 151               | 45              |
| 50th           | 38                     | 66               | 45          | 13         | 5        | 7                          | 7                     | 3                     | 20     | 17        | 12                                | 22                                       | 43           | 31                                    | 6                       | 67           | 16              | 178               | 30              |
| 51st           | 34                     | 51               | 35          | 12         | 4        | 4                          | 3                     | 6                     | 21     | 14        | 7                                 | 16                                       | 28           | 47                                    | 4                       | 54           | 9               | 142               | 29              |
| 52nd           | 40                     | 68               | 46          | 7          | 8        | 5                          | 7                     | 7                     | 19     | 18        | 7                                 | 13                                       | 31           | 40                                    | 10                      | 64           | 12              | 171               | 32              |
| Nov.           |                        |                  |             |            |          |                            |                       |                       |        |           |                                   |                                          |              |                                       |                         |              |                 |                   |                 |
| 1856           | 164                    | 167              | 113         | 28         | 20       | 35                         | 27                    | 39                    | 54     | 127       | 54                                | 78                                       | 92           | 136                                   | 39                      | 223          | 60              | 657               | 183             |
| Nov.           |                        |                  |             |            |          |                            |                       |                       |        |           |                                   |                                          |              |                                       |                         |              |                 |                   |                 |
| 1855           | 167                    | 115              | 89          | 8          | 8        | 36                         | 20                    | 33                    | 48     | 97        | 55                                | 83                                       | 94           | 85                                    | 38                      | 191          |                 |                   |                 |

The mortality (1719) in November 1856 was unusually large. The average number of deaths in the same month for the previous ten years not having been over 1200. It would be difficult to state all the causes of this increase. The weather was quite as good, and the city in as cleanly a condition as usual. No peculiar epidemic was noticed, and physicians in general reported no unusual amount of sickness in private practice. As the increase of deaths was among the poorer classes, and those attended from public institutions, it can be partially accounted for by the fact that the immigration was larger, and more sickness prevailed in their vessels than in November, 1855.

*Medical Retrospect.*—It is our design to effect arrangements whereby all improvements in the several divisions of medicine will be chronicled in the Retrospect department of this Journal; and in order that such effort may prove successful, each division will be prepared by a medical gentleman, who devotes especial attention to the branch over which he presides. That of Obstetrics is prepared by our collaborator, Geo. T. Elliot, M.D.

## OBITUARY.

DEATH OF DR. DAVID GREEN.—Died at his residence in this city, of apoplexy, on the 20th of October last, David Green, M.D. Dr. G. was an old and respectable practitioner and a member of the Academy of Medicine. He had an extensive practice, and was greatly esteemed by his numerous friends.

DEATH OF DR. W. C. WALLACE.—Died in this city, on the 25th of October, William Clay Wallace, M.D., in the fiftieth year of his age. He was a pupil of the celebrated Mackenzie, of Glasgow, and as an oculist, had a wide and extended practice. As a writer, he will be remembered as the author of papers relating to the Physiology of Vision. His death was sudden and unexpected.

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DEATH OF DR. J. L. CRANE.—Died at New Utrecht (near Fort Hamilton), of yellow fever, on the 16th of September, John Ludlow Crane, aged about 35.

It is with a heavy heart that we record the decease of our young, talented, and amiable friend. We first knew him as a student of medicine at the New York University Medical College in 1844-5, where he attracted our particular notice for his intelligence as well as his great zeal and devotion to study. Kind and amiable in his deportment, gentlemanly in his manners, and ingenuous in all his conduct, he won alike the respect and friendship of pupils and teachers. Doctor Crane was a native of Hackettstown, New Jersey, the son of Ross Crane, an old and respected resident of that place. He graduated at Princeton College in 1842, and at the University Medical College in 1845. Shortly after graduating he settled at Hanover, New Jersey, and commenced the practice of his profession, where he became acquainted with, and married, Miss Ely, daughter of Caleb H. Ely. About two years after, by the earnest solicitations of his friends, he located at Brooklyn City, where he remained but a short period, and forming the acquaintance of Dr. Dubois, of New Utrecht, they joined in copartnership, and removed to the former place about the middle of October, 1850, where he leaves a wife and three children. His partner also fell a victim to the epidemic a few days previous to himself.

Sad is the history of the doings of disease and death,—sad, indeed, when the theme is of those whom we at once love and respect. He was devoted to, and beloved by, his patients, ardent in the pursuit of knowledge, honorable in all his undertakings. He was rising rapidly in the estimation of the public as well as the profession, and he fell a victim, after a short illness, to yellow fever contracted in an infected district, and at the bed-side of his patients. Had our friend lived, he would have achieved fame, reputation, and wealth; he lived long enough to acquire what are of, perhaps, more real value—the love, admiration, and friendship of all who enjoyed his acquaintance. Dr. C. was a sincere and practical christian, having joined the Presbyterian Church as early as 1832, in the duties of life exemplary and irreproachable. His surviving friends knew him, they will remember him during their own brief “loitering by the way”—and after all, what greater sublunary good, than friendship’s remembrances, is there inscribed on the tablets of hope? His labors are ended—the scene is closed—care has ceased to trouble him—the weary one is at rest.

J. H. V.



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# THE NEW-YORK JOURNAL OF MEDICINE

FOR MARCH, 1857.

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PART FIRST.

ORIGINAL COMMUNICATIONS.

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ART. I.—*Post-fascial Abscess Originating in the Iliac Fossa, with a New Method of Treatment.* By GURDON BUCK, M.D., Surgeon to the New York Hospital.

THE following cases are communicated to the profession, in the hope that some assistance may be afforded the surgical practitioner in the diagnosis of a class of abscesses which might easily be confounded with others, the prognosis of which is less favorable, and in which the same treatment might hasten the fatal termination to which they so generally tend. The particular mode of treatment adopted in these cases, it is believed, has not hitherto been generally employed. It was first suggested by a careful study of the surgical anatomy of the parts involved; and the successful results which have followed its use may claim for it a favorable consideration. The acknowledged difficulty attending the diagnosis of abscesses of the abdominal parietes must be our apology for the minuteness of our narrative, though to such as have had experience of this difficulty, no detail that may serve to clear it up will be regarded as unimportant.

*Case 1.*—John Roach, a seaman; native of Pennsylvania; æt. 32; was admitted into ward No. 12, Marine Department of the New York Hospital, on the 3rd of July, 1843, with a deep-seated phlegmonous swelling in the left iliac and inguinal regions, of four weeks standing. At the time of its appearance he had been already suffering for a fortnight from

inflammation of the lymphatic vessels of the lower limb of the same side, that had been followed by several small sub-cutaneous abscesses, the remains of which were still to be seen : five or six between the groin and knee, and three between the inner condyle and malleolus.

The swelling in the groin has, from its commencement, been attended with pain on moving the limb, and has gradually increased in size. It fills up the iliac fossa, so that the fingers cannot be buried in it along the inner margin of the crest of the ilium, as on the sound side. It also extends behind the outer half of Poupart's ligament, and, to a distance of four fingers' breadth below it, a superficial furrow crosses the swelling on a line with this ligament. Its inner limits can be traced from the middle of Poupart's ligament, where the femoral artery bounds it, upwards and outwards in a curved line, approaching within three fingers' breadth of the umbilicus. A general fullness of the parts on the surface, rather than a well-defined tumor, indicates its existence. The skin covering the swelling continues movable, supple, and unchanged in color. No increased heat is perceptible to the touch, though the patient himself is, at times, sensible of an increase in the temperature. An obscure, deep-seated fluctuation can be felt. There is constant pain extending to the hip, and down the thigh nearly to the knee. The thigh is kept semi-flexed on the trunk, and cannot be straightened out. Patient feels very weak, and has been deprived of sleep for a fortnight by nocturnal exacerbations of pain. His countenance is haggard and anxious ; pulse 100, and weak ; respiration somewhat laborious. Any movement of the limb or coughing aggravates the pain in the groin ; his easiest position is on his left side. His belly is somewhat tympanitic, but supple. He has never had pain in the lumbar region, nor is there any tenderness on pressure there. His tongue is furred, dry in the middle, moist at the edges, and pale ; appetite tolerable ; bowels move spontaneously every second day. Ordered—poultices to abdomen, Magendie's sol. sulph. morph., gutt. xx, at bedtime.

July 5.—Opened the abscess in the following manner :—An incision, one inch in length, was made at a finger's breadth below the middle of the outer half of Poupart's ligament through the skin, sub-cutaneous tissue, and fascia lata ; a probe was then passed deeply upwards and backwards ; and, on being withdrawn, was followed by an escape of pus ; whereupon the track of the probe was enlarged, and a free



outlet afforded for the contents of the abscess, with evident relief to the patient.

July 6.—Still more decided relief has been afforded by the continued free discharge of matter, and the limb can be moved with greater ease.

For about five weeks the suppuration from the abscess continued very abundant, with considerable febrile action, and, at times, free perspiration; his pulse averaged 120 per minute, and his strength became much reduced. Two or three attacks of cholera morbus, within the same period, contributed very much to aggravate his other symptoms. After this, the suppuration gradually diminished, and his general condition steadily improved. Early in September, the discharge had entirely ceased, and the opening closed.

On the 18th September, the patient was able to walk about. Some degree of fullness still remained in the left groin; the deep swelling in the iliac fossa, and behind and below Poupart's ligament, had very much diminished; and the suppleness of the superjacent tissues was, in a great measure, restored. The thigh, which had very much emaciated, was regaining its plumpness, and motion at the hip joint was every day increasing. A steady, progressive improvement was also taking place in his general health. On the 27th September he was discharged from the hospital, cured.

*Case 2.*—William Davis, æt. 37 years; a seaman; native of the Sandwich Islands; of robust appearance; was admitted into the New York Hospital November 27, 1845, with a prominent tumor occupying the left iliac and inguinal regions, and extending laterally from the anterior superior spinous process to within four fingers' breadth of the root of the penis. In this direction it presented its longest diameter; its upper and inner margin approaches within four fingers' breadth of the umbilicus. Inferiorly, it somewhat overhangs Poupart's ligament, and is limited at its outer circumference by the crest of the ilium. The circumference of the tumor, towards the median line, is gradually lost in the surrounding surface, while its summit stands out in relief about two inches. The integument covering it is supple, without adhesions, without increased heat or discoloration.

The tumor itself is elastic, fluctuating, closely bound down at its circumference, and not admitting the fingers to be insinuated under its base, at any point. By grasping the tumor and crowding it backwards and downwards, its con-

tents are made to transmit an impulse behind and below the outer half of Poupart's ligament. This impulse is felt to a distance of nearly two inches below the ligament; on the surface, however, no external swelling is perceptible in this situation. A slight impulse is communicated to the swelling by coughing. In the erect position, it becomes somewhat more tense than in the recumbent; no translucency exists; no gurgling; no functional disturbance of the bowels; no pain is occasioned by handling it nor by the motions of the thigh upon the trunk. The neighboring lymphatic glands are slightly enlarged, but not tender. The patient is under no restraint in moving his body in any direction, and feels able to perform any sort of work. There is no tenderness on pressure over the lumbar region or along the spine. The spermatic cord is felt at the inner margin of the tumor, supple, and in a normal condition.

The previous history of this case, so far as the patient's imperfect knowledge of the language permitted it to be ascertained, was as follows:—The tumor first appeared about four months ago, while he was at hard work on board a vessel. A feeling of soreness drew his attention to the part when the swelling was discovered, of the size of a hen's egg. For one week he gave up work and kept below, and then, of his own accord, resumed his duties. The swelling attained its present size in about a month, since which it has remained stationary. His general health is apparently good, and his strength unimpaired. Pulse somewhat accelerated, and tongue coated with a yellowish fur.

The extension of the tumor downwards behind and below the outer half of Poupart's ligament, as evinced by the transmission of fluctuation to the superior and outer part of the thigh when pressure was made above, warranted the conclusion that the collection of fluid was situated behind the iliac fascia.

From the anatomical conformation of this region, it was impossible for any collection of matter developed more superficially to make its way behind the outer half of Poupart's ligament. Though the great prominence of the tumor, and the entire absence of all signs of inflammatory action, together with the freedom of motion of the thigh, were features which cast doubt on its nature; still the fluidity of its contents was apparent, and the necessity of their evacuation clearly indicated. In this case, the mode of opening to be preferred was the same as in the preceding one. Such,

however, was not the judgment of the attending surgeon in charge of the patient. An incision was made, of five or six inches in length, across the most prominent part of the tumor, and parallel with Poupart's ligament. After carefully dividing the skin and sub-cutaneous tissues, layer by layer, the knife suddenly penetrated the cavity of the swelling, and gave vent to about a pint of thin, ill-conditioned, serofulous matter, of a brownish color, intermixed with particles of curdy substance. The opening being further enlarged, the fingers were introduced into the cavity of the abscess and passed downwards behind the outer half of Poupart's ligament, to the extent to which the fluctuating impulse was felt before the operation.

This feature fully substantiated the opinion formed respecting the seat of the matter. No denuded bone could be detected in the iliac fossa.

December 27.—Up to this date, the patient's general health continued good; the discharge was small in quantity, and of good appearance. A small abscess pointed below Poupart's ligament and opened. In the further progress of the case, however, symptoms of phthisis supervened, with cough, hectic, and gradual emaciation. The abscess continued open.

April 3, 1846, he was discharged at his own request.

*Case 3.*—Benjamin C. Smith, æt. 54 years; a native of the State of New York; seaman; with fair complexion and sandy hair; entered the hospital on January 13, 1847, with unhealthy sloughy ulcers on the nape of the neck, that had been preceded by undermining abscesses. Soon after admission, erysipelas supervened, involving the face and scalp, and followed by abscesses in the eyelids, and extensive undermining suppuration of the scalp. While gradually convalescing from the low cachectic condition thus induced, he began, early in the month of March, to complain of pain in his left groin, and inability to straighten out the thigh. At the same time his appetite fell off; he became feverish, and his general condition deteriorated.

March 15.—On careful examination of his groin, a deep swelling, tender, and painful on pressure, was felt behind the outer half of Poupart's ligament, and extending upwards and occupying the iliac fossa. Its surface could be traced along the inner margin of the crest of the ilium, and in such close contact with it as not to allow the fingers to be buried at all in the fossa. The swelling also extended below Poupart's



ligament two or three fingers' breadth distance; along the inner margin of the swelling, the femoral artery was felt. Fluctuation was perceptible below the outer half of Poupart's ligament, when deep pressure was made over the iliac fossa above. The skin and subjacent tissues covering the swelling were still supple and unadherent, and the surface free from heat or redness. On comparison with the sound side, an increased degree of fullness was observable. The thigh was kept flexed at an angle of about  $145^{\circ}$  with the trunk, and could not be extended to the straight position. Stinging pains occasionally extended down the thigh, but more particularly when the swelling was handled.

An incision was made, as in Case No. 1, down through the fascia lata, and a grooved exploring needle passed upward and backward to the depth of about two inches, when a few drops of pus escaped along the groove. The opening was then enlarged, and a quantity of matter evacuated. Two ligatures were applied to a small artery that was divided by the incision.

March 17.—Great relief has followed the opening of the abscess. The outlet having become blocked up, a female catheter was introduced, and a large discharge followed. The catheter could be passed in nearly its whole length, and came in contact with denuded bone. The thigh can be extended almost to its full degree. General condition favorable—no fever.

March 25.—The discharge of pus continues, but has diminished in quantity. Generous diet and tonics are allowed.

April 5.—The abscess has ceased to discharge, and the patient is rapidly gaining in health and strength.

April 26.—He was discharged cured, with the abscess closed.

*Case 4.*—Robert Brown, æt. 40 years; native of Ireland; shoemaker; was admitted into the New York Hospital, January 11, 1851, with compound comminuted fracture of the right leg, involving the ankle joint, that had happened just before admission, while in a state of intoxication. On the 29th of the same month, amputation below the knee was performed. On the 9th of April, when the stump had nearly healed, and patient's general condition become tolerably good, my attention was first called to a soreness in the right groin and iliac region. He had previously complained of this part; and from superficial examination, it was supposed to depend upon inflamed lymphatic glands, caused by the



sore of the stump, and for which blisters had been applied. A careful examination being now instituted, it was ascertained that the iliac fossa was filled up by a deep-seated hard swelling, extending down behind Poupart's ligament, and confined to its outer half. The femoral artery could be distinctly felt skirting the inner margin of the swelling. The fingers could not be buried in the fossa, nor embrace the crest of the ilium, or the anterior superior spinous process, as could readily be done on the opposite side. No fluctuation could be distinguished, nor was there any redness of the surface, nor œdema of the subcutaneous tissue, nor increased heat. Pressure gave pain at every point where the swelling could be reached. The outer half of Poupart's ligament was tense and unyielding, while the inner half retained its natural suppleness. The swelling could not be distinguished much below the ligament. Flexion of the thigh caused no pain, but extension did when carried to an extreme degree. There was no pain in the lumbar region, nor had there been at any time. The patient, who was of a weak constitution, and had had symptoms of phthisis, dated back the origin of this ailment three months prior to the accident to his leg. He could assign no other cause for it than that he had strained the part, while engaged in piling wood, being obliged at the time to stand on tiptoe and place the wood as high as he could possibly reach.

*Operation.*—An incision being made as already described, the fascia lata was found tense and unyielding. A trochar exploring needle in a canula was passed upwards and backwards, and soon arrived in a free cavity, from which pus escaped through the canula. After enlarging the track, a tent was introduced and a poultice applied. Generous diet, cod-liver oil and quinine were given.

May 4.—The discharge from the abscess is decreasing. Strength is good, and patient able to sit up.

May 28.—The discharge having become thin and scanty, ceased three days ago. A firm, circumscribed tumor, about the size of a hen's egg, is still felt in the iliac fossa.

May 29.—The patient was discharged cured.

Several months subsequent to leaving the hospital, he reported himself in good condition.

*Case 5.*—Mrs. B., æt. 25 years; a lady of delicate constitution, residing at No.— Pike street; is a patient of Dr. I. W. and has a deep swelling in the left groin, filling up the iliac fossa and extending down behind Poupart's ligament, but

confined to its outer half. A fullness, rather than a defined swelling, is all that is observable on the surface. The femoral artery skirts its inner margin. The presence of the swelling prevents the ends of the fingers from being buried in the fossa, along the crest of the ilium, or at the anterior superior spinous process, though this can readily be done on the opposite side. The integument covering the swelling is free from redness or heat, and retains its natural suppleness. The subcutaneous cellular tissue is also free from œdema and induration. No fluctuation can be perceived. Deep pressure causes pain wherever the swelling is within reach ; the outer half of Poupart's ligament is tense and unyielding. About a hand's breadth lower down on the thigh and towards its inner margin, the skin is œdematous, indurated, and somewhat swollen over a space of about five inches in circumference ; this has appeared within a few days, and is disconnected from the swelling above. The thigh is kept flexed at an angle of about  $135^{\circ}$  with the body, and attempts to extend it cause pain in the swelling. Two months prior to my first visit (on March 30, 1852,) Mrs. B. had been confined with her second child, after an ordinary labor. On the second day following her confinement, she was seized with a severe rigor and pains in the lower part of the abdomen, accompanied with tympanitis and a rapid pulse, which led Dr. W. to apprehend an attack of puerperal fever. Purgings, etc., without the aid of blood-letting, subdued these symptoms. In a short time, however, she began to be seized with chills, which recurred at irregular periods, sometimes twice within twenty-four hours, and were followed by fever of short duration and profuse perspiration. At the expiration of between three and four weeks after confinement, her left thigh began to be drawn up, so that, in attempting to walk across the room she was obliged to lean her body forward, and was unable to stand erect with her foot touching the floor. She experienced, however, no pain in the groin, nor has she, to the present time. Her countenance is pale and languid, and her pulse feeble. She has at no time had pain in the lumbar region, nor is there tenderness on pressure over this part. The absence of fluctuation was the only feature which made me hesitate in regard to the existence of matter behind the iliac fascia ; all the other symptoms, general as well as local, were unequivocal. On careful inquiry, no connection could be established with the lumbar region or colon, as the point of departure of this phlegmonous swelling. Flax-seed poultices were advised, and kept constantly applied until

April 3.—When it was decided to make an explorative puncture. An incision was made, as in the preceding cases, below the outer half of Poupart's ligament, through the integument and subjacent tissues, down to the fascia, which was found tense and unyielding. A small sized trochar exploring needle, sheathed in a canula, was passed upwards and backwards behind Poupart's ligament, and soon arrived in a free cavity. The needle being withdrawn, matter escaped through the canula. Before withdrawing the canula, a narrow-bladed knife was passed up by the side of it, and the track enlarged to afford a free outlet. A tent was then inserted, and poultices directed to be continued. The tonic and supporting treatment, already in use, was also continued.

April 7.—The use of the tent, which had been changed daily, was laid aside. The discharge was moderate in quantity, and the patient's condition was gradually improving. The subsequent progress was favorable. At the expiration of about six weeks, the opening had closed, and the patient was able to ride and walk out.

*Case 6.*—Mary Ann T., æt. 12 years, a girl of pale complexion and very delicate appearance, whose father had been of a very scrofulous constitution, suffered in the month of May, 1853, from a large abscess that formed spontaneously in the axilla, and which, after being opened, discharged very copiously for some time. After a gradual recovery, she enjoyed a comfortable state of health until the month of August following, when she began to complain of pain in the right hip and groin. Two or three weeks after this, she was observed to walk lame, with the thigh retracted, and to have hectic fever at irregular periods. On the 22nd of November following, she was first examined at her residence, No. 193 West 25th street, and the following particulars ascertained:—The right thigh was kept flexed upon the trunk, and adducted toward its fellow. The body inclined to the opposite side and caused a notable projection of the lame hip, suggesting at once the suspicion of hip disease; the motion of the joint, however, was found free, and unattended with pain or swelling about the trochanter; attempts to extend and bring down the thigh, however, caused pain in the region of the psoas and iliacus muscles. There had been at no time pain in the lumbar region, nor was there any tenderness on pressure in this part. She was still able to walk, by stepping on her toes, and inclining her body forward, taking care to maintain it always at the same angle



with the thigh. In the recumbent position, a swelling was recognized in the right iliac fossa, closely hugging the crest of the ilium and the outer half of Poupart's ligament, so that it was impossible to bury the ends of fingers in the fossa, or to grasp the anterior superior spinous process between the thumb and fingers, or to depress the outer half of Poupart's ligament. The inner margin of the tumor could be traced from the middle of Poupart's ligament upwards and backwards in a line corresponding to the superior strait of the pelvic cavity. There was no redness of the surface, nor adhesion of the skin to the subjacent tissues, nor œdema, nor elevation of temperature. A moderate degree of fullness was observable at and above Poupart's ligament. Deep pressure caused pain. The perception of fluctuation was obscure and doubtful. Her pulse was habitually frequent, and her countenance wore an anxious expression. She still retained a good degree of strength. Directed poultices to the swelling. Repeated examinations having corroborated the condition above described, and confirmed my opinion of the existence of a collection of matter behind the iliac fascia, an opening was made on the 28th of November, in the presence of Drs. Van Buren and Halsted, and Mr. H. D. Noyes, pupil. This was performed, as in the preceding cases, and a grooved exploring needle passed upwards and backwards nearly two inches, when matter escaped. After incising the opening, and giving vent to a large quantity of thick pus, a tent was introduced; a copious suppuration succeeded. Poultices were kept applied, and cod-liver oil and syr. iodide of iron were administered for several weeks; also super-sulphate of quinine, with generous diet and malt liquors.

On the 4th of March, 1854, I found my patient had already been walking about for several weeks; the discharge had become reduced to a small quantity of thin matter. She had almost regained the power of holding the body erect with the foot applied flat upon the floor; hardness continues in the seat of the tumor. She survived till the 23rd of November following. The discharge continued from the groin, sometimes abundant, and at other times scanty and thin. An attempt was made to use injections of a weak solution of the bi-chloride of mercury, by means of a gum elastic catheter introduced into the remotest part of the abscess; but this was rendered impossible by her extreme timidity and uncontrollable intractability. Gradual emacia-



tion took place, and progressed to an extreme degree. She kept up till within a few days of her death, and was at last exhausted by a profuse diarrhœa. No examination of the body could be obtained.

\* *Case 7.*—John Burr, æt. 27 years; native of New York; boatman; entered the New York Hospital on the 15th of March, 1855, with an inflammatory swelling in the right iliac region, of which he gave the following history:—About six months ago, without injury or other obvious cause, he began to notice a swelling on the inner side of the middle of the crest of the ilium, accompanied with pain and inability to straighten the thigh to its full extent on the trunk. These symptoms passed off, and again recurred, according to the patient's recollection, once in about two or three weeks. He was not obliged, however, to give up his occupation, or to keep in the house until within eight or ten days of his admission. At this time, the following was observed:—The lower and right portion of the abdomen was swollen and prominent; the swelling was limited below and to the outside by the crest of the ilium, and the outer two-thirds of Poupart's ligament, with which parts it was so closely connected, that it was impossible to insinuate the ends of the fingers between them and the swelling, although this could easily be done on the opposite side. Toward the umbilicus, the swelling was gradually lost, and its limits could only be defined by percussion, which was dull for about two-thirds of the distance from the ilium to the umbilicus. The line of dullness receded farther from the umbilicus as it was traced upwards and outwards. The abdominal muscles on the right side were kept in such a state of tension as to prevent the limits of the swelling from being felt by deep pressure. The integument covering the swelling had undergone no change in color, but had lost its suppleness, and was movable only to a limited extent on the subjacent tissues. Deep pressure with the ends of the fingers disclosed the existence of œdema and tenderness over every part of the swelling, especially in the neighborhood of the anterior superior spinous process. Poupart's ligament was evidently pushed downwards, as well as forwards; its inner half retained its natural suppleness, while its outer half was tense and unyielding. No fluctuation was perceptible. The thigh was kept flexed upon the trunk and somewhat adducted, and could not be extended without causing pain in the swelling. When the patient stood up, he inclined his body

forward, so as to keep his groin relaxed. On careful inquiry, it was ascertained that there had not been any pain or lameness in the lumbar region. The patient had generally enjoyed good health, was free from fever, though his pulse was somewhat accelerated. Six leeches were directed to the swelling, to be followed by poultices.

March 19.—Patient had a smart rigor, followed by a fever. The swelling appears to have somewhat increased, and become much more painful; the pain spreading upwards, towards the false ribs, and around the body. Made an explorative puncture below the outer half of Poupart's ligament, in the same manner as already described, and reached a cavity in the iliac fossa, containing pus. Five or six ounces were evacuated, of a grayish color, and fetid odor. Poultices directed to be continued.

March 21.—Patient has experienced great relief since the evacuation of the matter. The swelling has somewhat subsided, so as to render the prominences of the crest and the spinous process of the ilium more visible. The dullness has disappeared to within a finger's breadth of the crest of the ilium, and Poupart's ligament. The discharge continues free, and the thigh still flexed.

March 27.—A large slough came away from the abscess, and a slight blush of redness extends about a hand's breadth around the opening; the discharge is free; he has had no chill; is allowed tonics and good diet.

This patient remained in the hospital, under treatment, for several months. The abscess continued to discharge more or less, without interruption. About the middle of April, he had an attack of acute pneumonia of the right lung, from which he gradually recovered.

May 26.—Began injecting the abscess with Lugol's solution of iodine, and repeated it every third day until the 27th June, without benefit.

July 7.—A small slough appeared at the orifice of the abscess; and, after its removal, a hard substance was encountered, about one inch deep, which, on being withdrawn, proved to be a pin of ordinary size, encrusted with biliary concretions, except at its head and point. The body was of the size and form of a small olive, with a rough, uneven surface. He had no recollection of ever having swallowed a pin.

July 14.—Air escaped from the abscess. The discharge fluctuates in quantity, and sometimes has a faecal odor. The thigh is still retracted.

August 9.—He was discharged from the hospital, and went into the country. In October, after his return from the country, the abscess still continued to discharge. The subsequent progress of his case was not ascertained.

*Remarks.*—Of the seven cases reported above, five were males, and two females. Their ages ranged from twelve to fifty-four years. In four of their number, the disease occupied the left side; and in three, the right. In one of the two female patients, the disease occurred during the puerperal state.

*Anatomy.*—The importance of an accurate knowledge of the relative anatomy of the parts involved in this form of abscess will be admitted, if it is remembered that both the diagnosis and treatment are based upon it.

The crural arch, which is spanned by Poupart's ligament, is divided into two halves, by a strong process of aponeurosis, sent off posteriorly from the middle of this ligament, and inserted into the ileo-pectineal eminence. The inner half serves for the passage of the great blood vessels, lymphatics, etc.; the outer for the psoas magnus, and iliacus internus muscles, and crural nerves. The fascia iliaca, of which the above process is also a continuation, is a strong aponeurosis, which is continuous upward with the outer half of Poupart's ligament, and spreading out over the anterior face of the iliacus and psoas magnus muscles, is inserted outwardly into the inner margin of the crest of the ilium, and inwardly into the linea ileo-pectinea. It is also prolonged upwards upon the psoas, as high as its origin from the lumbar vertebræ. Below Poupart's ligament, and continuous with it, the fascia lata covers the psoas and iliacus, in common with the other muscles of the thigh, and, at the inner margin of these two, gives off posteriorly a septum, which is continuous above with the process of aponeurosis, already described as inserted into the ileo-pectineal eminence. Now, if an incision be made parallel with Poupart's ligament, and below its outer half, down through the fascia lata, the psoas and iliacus muscles will be exposed, and the fingers can be passed upwards behind Poupart's ligament so as to arrive in the fossa, behind the iliac fascia. The same track can be followed from above downwards, by incising the iliac fascia transversely, and passing the fingers downwards behind it and the outer half of Poupart's ligament, till they arrive on the anterior face of the thigh. Here, then, we have a well-defined track, bounded posteriorly by a bony surface, anteriorly by a strong fascia,



and shut in on either side by the insertions of the fascia into the bone. Suppuration taking place in this track could only reach the surface through the fascia, by the slow and gradual process of ulceration and absorption.

*Pathology.*—The able author of an article in the *British and Foreign Medical Review* (page 456, April No. for 1840,) remarks “An abscess in the cellular tissue of the right iliac fossa, when it does not result from a blow or external wound, from perforation of the appendix or cœcum, or from child-birth, is, we believe, in almost every instance, the consequence of disease of the bones, either of the back or pelvis. There may be cases in which an abscess forms in the iliac fossa from idiopathic inflammation of the cellular tissue, but we have never seen one.” Several of the cases narrated above, prove, as we believe beyond a doubt, that suppuration may take place in the iliac fossa behind its fascia, unconnected with caries of the lumbar vertebræ or pelvis, or morbid lesions of the cœcum or colon. There is no reason why the cachectic condition, upon which the formation of abscesses depends, may not manifest itself in this particular region as well as in any other of the body. The functions of the psoas and iliacus muscles render them liable to the injurious effects of over-straining efforts, and such efforts may be the exciting cause of suppurative inflammation in the cellular tissue surrounding these muscles, especially where a general cachectic condition co-exists to favor it. Such seems to have been the fact in Case No. 4.

*Causes.*—In Case No. 1, the irritation was propagated in the course of the absorbent vessels, which had recently been the seat of inflammation, resulting in numerous small sub-cutaneous abscesses along their track from the inner ankle to the groin.

In No. 2, which was a remarkable example of cold abscess, the patient, though apparently in good health when the abscess was *opened*, exhibited subsequently all the signs of tubercular cachexia.

In No. 3, a low cachectic condition, induced by copious suppuration following erysipelas of the face and scalp, coincided with the development of suppurative inflammation in the iliac fossa, without any obvious exciting cause.

In No. 4, after violent efforts, by which the psoas and iliacus muscles were over strained, pain and lameness first seated themselves in the iliac region; and at length, while



the system was suffering under depressing influences, suppuration developed itself.

In No. 5, the only case of an adult female, the disease originated in the puerperal state.

In No. 6, the patient's whole aspect was expressive of a hereditary scrofulous diathesis, which had manifested itself previous to the suppuration in the iliac region, by the development of a large abscess in the axilla.

In No. 7, the escape of a foreign body from the intestine (probably the cœcum) first excited suppurative inflammation, and its protracted sojourn in the abscess perpetuated its continuance for a long period.

*Diagnosis.*—Other forms of abscess, besides the one in question, are found located in the iliac region, which it is important to distinguish.

1. In this, as in other regions of the abdomen, suppuration may take place in the muscular parietes, or in the cellular tissue between the muscles and peritoneum. Such an abscess would not, however, be confined within the same precise limits; nor, in case it was seated in the cellular tissue of the fossa anterior to its fascia, could it extend behind or below Poupart's ligament. Retraction of the thigh would not be produced by it, and adhesion of the skin and subjacent tissues, as well as redness and inflammatory œdema, would take place early in its progress.

2. Abscesses form in consequence of perforation of the vermiform process and cœcum. The suppuration in this case is commonly confined by adhesions between the peritoneal surfaces of the intestines and parietes, and the tumor produced is not confined within the same anatomical limits as the abscess in question. The same deviation from the anatomical characters already so often insisted on, is observable in abscesses produced by fæcal obstruction, as well as those that are developed in the appendages of the uterus during the puerperal state.

3. Ordinary psoas abscess, which is understood to depend on disease of the vertebræ, may and does, in its descent along the psoas muscle, sometimes keep behind the iliac fascia, and occupy the same track as the idiopathic abscess; but its connection with the vertebræ can be readily ascertained by careful inquiry.

4. The question may arise, whether caries of the os ilii itself may not cause suppuration in the fossa, and present a swelling confined within the same anatomical limits. Doubt-

less it may, and so also may a fracture of the ilium. The author believes he has seen such an example after fracture, where, besides other abscesses around the pelvis, one formed and occupied exactly the limits of the fossa, and was evacuated by an opening made below Poupart's ligament.

The true post-fascial abscess originating within the iliac fossa from idiopathic inflammation of the cellular tissue, may be described as follows:—It presents itself, though much more rarely, in a chronic as well as acute form, and locates itself in either the right or left iliac region. Though it may occur in early youth, it is most frequently met with in adult age, and affects alike both sexes. The tumor which it forms rises up from the hollow of the ilium, pushing before it the fascia and outer half of Poupart's ligament, so that the crest of the ilium and the anterior superior spinous process can no longer be grasped between the thumb and fingers. The outer half of Poupart's ligament is rendered tense and unyielding, and a deep-seated induration may extend two or three fingers' breadth below it. The precise limits of the swelling can only be appreciated by the touch and percussion over its abdominal portion; upon the surface the eye only perceives a fullness or a diffuse swelling of these parts. No increased heat or redness of the skin existed in either of the cases above narrated. In four of them (Nos. 1, 4, 5, and 7), no fluctuation could be detected; in two (Nos. 3 and 6), it was obscure and doubtful; while in one only (No. 2, the cold abscess), it was unequivocal. In all (except No. 2), the thigh was retracted, and attempts to straighten it caused pain. In all the cases (except No. 2), constitutional disturbance and fever accompanied the local disease. In all the acute cases, the absence of heat, redness, adhesions, œdema, and also of fluctuation in three of them, is to be attributed to the remoteness of the abscess from the surface, and its confinement beneath the fascia.

*Treatment.*—The treatment of abscesses in the iliac region, laid down by surgical authorities, does not differ materially from that of abscesses situated elsewhere. Means suited to produce resolution of the inflammation and prevent suppuration are advised in the early stage. When these have failed, such means as will hasten the approach of matter to the surface, and thus afford an opportunity to evacuate it by an opening, are then to be resorted to. In this form of abscess, the first object would be very rarely attained, owing

to the remoteness of the seat of inflammation from the surface and its confinement beneath a strong and tense fascia. For the same reason, the approach of suppuration to the surface would be very tardy, and hence great danger might be apprehended from the injurious effects of long pent-up matter, such as caries of the os ilii, as was threatened in Case No. 3, where denuded bone was encountered at the bottom of the abscess; also, deep burrowing along the walls of the pelvic cavity and openings into the peritoneum, intestines, vagina, and bladder. With the view of averting these disastrous consequences, a point was sought where an opening might be early established for the escape of the suppuration. The point selected possesses the advantage of safety in respect to its anatomical relations, it being remote from the peritoneum and important blood vessels; it affords, also, the most dependent outlet. The mode of performing the operation has been sufficiently described in the preceding narrative. No time should be lost in resorting to it; the absence of fluctuation need not deter from it. The phlegmonous character of the swelling; its anatomical relations to the iliac fossa and Poupart's ligament; the absence of disease of the lumbar vertebræ, and the coexisting retraction of the thigh; these points being clearly made out, are sufficient to warrant the conclusion that suppuration has taken place in the fossa behind the fascia.

It is hardly necessary to add that the approved auxiliary means of abating inflammation, such as leeches, poultices, etc., together with appropriate constitutional remedies, are not to be omitted.

No. 121 TENTH STREET, February 2, 1857.

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ART. II.—*Sketch of the History of the College of Physicians and Surgeons of the University of the State of New York. Taken from an Address delivered on the occasion of the Opening of the New Building of the Institution, on the corner of Twenty-third Street and Fourth Avenue, January 22, 1856. By EDWARD DELAFIELD, M.D.*

[THE address delivered by Dr. Delafield, on the occasion of the opening of the new building of the College of Physicians and Surgeons in last year, contains so much of historical interest connected with the profession in our city which might not otherwise be placed on record, that we feel that free



extracts from it cannot prove otherwise than acceptable to our readers, and have therefore transferred a large portion of it to our pages.]—*Eds. N. Y. Jour. Med.*

A history of the College of Physicians and Surgeons is a history of medical education in the city of New York ; for, although it was not the first institution in which medicine was here taught, previous attempts had met with so little success, as to be more important as having given origin to the school, than supplied in themselves the object in view. As long ago, indeed, as the year 1768, while our state was still one of the colonies of Great Britain, a medical school was established, in connection with the college of the province, then called King's College ; but which, since the revolution, has borne the name of Columbia College : and the learning and talent of its first professors were of no mean order. Dr. Samuel Clossy, was first Professor of Anatomy ; Dr. John Jones, of Surgery ; Dr. Peter Middleton, of Physiology and Pathology ; Dr. James Smith, of Chemistry and *Materia Medica* ; Dr. John V. B. Tennent, of Midwifery ; and Dr. Samuel Bard, of Theory and Practice of Physic.

Every branch of medical science now taught was, even at that early day, provided for ; and the learned men who filled the professors' chairs will not lose by comparison with those who have succeeded them. Nor were the founders of the medical college less aware than ourselves of the necessity of clinical instruction, and of the observation of disease itself, by those who would treat and hope to cure it when called into the profession. At the medical graduation in 1769, Dr. Samuel Bard delivered a public address, pointing out the necessity and advantage to medical education of a public hospital ; and so admirable was this discourse, and so convincing to its hearers, that, upon the very day it was delivered, the Governor of the Province set on foot a subscription for its establishment. The sum of £800 sterling was subscribed by individuals, and in a very short time the corporation of the city added £3000 to the fund. This was the beginning of the New York Hospital, an institution devoted equally to the relief of suffering humanity and the promotion of medical science. Its present condition we all know. It is second to none at home or abroad, and its Governors have the proud satisfaction of knowing that they have improved the institution under their charge, until it has become a model which may well be imitated by any other public hospital.



But when the war of the revolution broke out, the building for the New York Hospital was not completed; nor were its objects carried into execution until January 3, 1791, when it was opened for the reception of patients. The medical college shared the same fate. Its professors were scattered abroad; the lectures suspended, and finally abandoned. The school was never reorganized under the same professors, and New York remained without one for some years after the revolution. Some attempts were indeed made, and a medical school was organized, and professors appointed; but it did not go into operation, and no lectures were given.

On the 13th April, 1787, the Legislature passed an act establishing the University of the State of New York, and appointed twenty-one of its principal citizens Regents of the University. Under this act the present Board of Regents was organized, and held its first meeting at the Exchange, in this city, on the 17th July, 1787. But for several years they took no interest in the subject of medical education, and nothing was done.

It was not until February, 1791, that the Regents took any note of medical matters; and then the subject was brought before them by a petition from Dr. Nicholas Romaine, who may, therefore, be considered as the originator of the first medical school after the revolution; and it was this memorial of Dr. Romaine, which, in its consequences, laid the foundation of the College of Physicians and Surgeons of the State of New York. He stated in his petition, that lectures on all the subjects essential to medical education had already been given in the city in a college instituted by himself, and that the corporation of the city had committed "to his charge the sick in the almshouse and bridewell, whose diseases are registered, together with daily report of the symptoms, the prescriptions and effects of medicines, for the farther improvement of the students of physic; and that clinical lectures are delivered once every week on cases selected from the number of the sick." Here then were all the elements of a medical school, and this was the first attempt in any part of our country at giving clinical instruction, now deservedly deemed so important a part of medical education.

The subject was taken up in earnest by the Regents, and a committee appointed to visit Dr. Romaine's College, who reported favorably on his petition. But, even at that early

day, the seeds of discord had already been sown among the physicians of New York; and, first, a counter petition from the medical society of the state was presented, and afterwards a movement in Columbia College defeated Dr. Romaine's plans.

Eventually, Columbia College succeeded in organizing a medical faculty; and on the 14th February, 1792, the professors were appointed. The faculty was a strong one; it included Dr. Bard, Dr. Bailey, Dr. Nicoll, Dr. John R. B. Rodgers, Dr. William P. Smith, Dr. Post, Dr. Hamersley, and Dr. Richard S. Kissam; and this became the state school, acknowledged by the Regents, although not established by their authority. But Dr. Romaine, although first to originate a medical school in the city, did not join with Columbia College, and retired from medical teaching until several years afterwards.

The first grant of money by the Legislature in aid of medical education, was made in March, 1797. Dr. Post having gone to Europe for the purpose of collecting an anatomical museum and preparing himself to lecture on anatomy, brought out with him a very valuable collection, the foundation of that now in the College. It was for the preservation and enlargement of this collection, that the grant was made; the sum of \$500 annually, being appropriated by the Legislature for this purpose.

The school thus organized, although it started with bright prospects, had but moderate success. Its classes never reached seventy students, and after a time they even fell off materially from that number; and only thirty-five students received the honors of the college from its foundation, until the year 1811.

It was, no doubt, this want of success in the medical faculty of Columbia College which encouraged others to come forward and attempt to do better. In 1806, the law establishing county medical societies, and also a state medical society, was passed; and on the 3rd March, 1807, the New York County Medical Society presented a memorial praying an act of incorporation as a College of Physicians and Surgeons, under the patronage of the Regents of the University; and accompanying this was a communication to the Regents from Dr. Romaine. I have already stated his failure in attempting to establish a medical school in this city, although he was the first to propose it. He now came forward with much more influence as President of the New York County

Medical Society. As before, he met with powerful opposition; both from members of the society, and Columbia College; but his energy and perseverance overcame all obstacles, and he succeeded, with his associates, in obtaining a charter from the Regents, which was granted on the 12th March, 1807. And thus commenced the first legal existence of the College of Physicians and Surgeons of the University of the State of New York, the title it still continues to bear; and it is for this institution we have prepared the building in which we this day are assembled.

The charter enacted that all persons who were at that time members of the Medical Society of New York, and all physicians and surgeons then resident in the county of New York, and authorized by law to practice medicine, should be trustees or members of the new college; and that their successors should continue to perform the same functions. The machinery of the government of the college, as thus constituted, was evidently too cumbersome to work well; and this became so evident, that we find the Regents, the very next year, enacting that the power to elect the President, Vice-President, Registrar, Treasurer, and thirteen Censors, in whom the government of the college was more immediately vested, should no longer be exercised by the County Medical Society, but by the Regents themselves; and these offices were to be held during the pleasure of that body. The number of persons first incorporated as trustees was more than one hundred, and included all who had any pretensions to medical skill in practice.

Such a body as this, as it soon appeared, was in every way unfit for the management of a seminary of learning, and it was not surprising that in so short a time the Regents found it necessary to take the college out of its hands, and entrust it to a more limited and select number of persons.

The County Medical Society were still the college, and its members trustees, but under the new arrangement their powers were so limited as to be almost nominal. The immediate government was vested in a *Senatus Academicus*, consisting of the President, Vice-President, Registrar, Treasurer, and Professors, who derived their authority directly from the Regents.

But faulty as was its first organization, the college was thus fairly established; on the 5th May, 1807, the following officers were elected by the trustees:—Nicholas Romaine, M.D., President; Samuel L. Mitchill, M.D., Vice-



President ; Archibald Bruce, M.D., Registrar ; Abraham Brower, Treasurer.

The Professors, as appointed by the Regents, were—Edward Miller, M.D., Professor of Practice of Physic ; Samuel L. Mitchill, M.D., Chemistry ; David Hosack, M.D., Botany and Materia Medica ; Benjamin Dewitt, M.D., Institutes of Medicine.

But as the system of instruction thus arranged would have been incomplete, the trustees established lectureships to supply the deficiency, and appointed Nicholas Romaine, M.D., and John Augustine Smith, M.D., Lecturers on Anatomy ; Benjamin Dewitt, M.D.,\* Lecturer on Chemistry ; David Hosack, M.D., on Surgery and Midwifery ; Edward Miller, M.D., on Clinical Medicine.

The faculty, thus constituted, was a strong one ; but the college was entirely destitute of funds, and its means and appliances for illustrating the lectures exceedingly meagre. Its sessions were held in a small two-story building, in Robinson street, near Columbia College, a position then in a central part of the city. Its lecture-rooms were very small, containing only a few benches and a table, at which sat the professor ; and the attic supplied the only place left for a dissecting room. The anatomical museum had merely germs of what was required, and the chemical laboratory was equally small. But what was wanting in means was made up in the energy and industry of the gentlemen engaged in the enterprise. They succeeded in collecting, at the first session, fifty-three students, a number small indeed in itself, but large for a first attempt at that period, and with a rival in Columbia College. That they satisfied public expectation, they learned by a very substantial proof ; for at the next session of the Legislature, the state made a grant to the college of the sum of twenty thousand dollars.

At the second session, the lectures were attended by seventy-two students, a larger number than were ever before collected as a medical class in our city ; and at the third session, about the same number were present. But then the college received a check. It appeared that its faculty was composed of discordant elements, and dissensions soon grew up among its members, which proved irreconcilable. No good would now arise from inquiring into the cause of these quarrels ; but their effect was decided and

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\* In the absence of Dr. Mitchill, then Senator in Congress.



most unfortunate. Some of the professors withdrew from the college; lectures were delivered on only particular branches by the rest; and the pupils were again reduced to only one-third their former number. The Regents of the University, upon being informed of this unfortunate condition of the college, determined to reorganize it; and then granted an entirely new charter, under which the institution has since been governed. It was now taken entirely out of the hands of the Medical Society, and its interests and management confided to twenty-five trustees, appointed by the Regents themselves, and removable at their pleasure. But, although the college was thus rendered more free to pursue its object without interference, it had not within itself sufficient strength to be sustained. The medical faculty of Columbia College still existed. Dr. Romaine, the most ardent and active among the originators of the college, forsook it and became foremost among its enemies. Associating with himself several talented and aspiring young men, he formed another school under the name of the "Medical Institution," under the auspices of Queen's College, in New Jersey. It thus fell out that New York, with then less than 100,000 inhabitants, had three medical schools, dividing between them the amount of medical talent fitted for teachers, adequate only to the formation of one good institution. In consequence, neither college succeeded, and the cause of medical education languished. And, as a proof of how feeble were the schools which thus undertook to teach medicine, I may state, on the authority of one of the surviving members of one of these schools, that at one time, there were three professors of anatomy in New York, professing for a whole session to teach anatomy, and without a single subject for dissection in either college. And the bad state of feeling which at the same time existed between these rival schools, tended still farther to injure them in public estimation. There was not, in this state of things, the wholesome competition, the generous rivalry, which benefits all parties engaged, as well as the general community. It was a mere struggle which, by destroying the rest, should absorb within itself all the patronage of the profession. And one of these objects was surely accomplished. They destroyed one another, but not to the advantage of New York, but that of its sister city and great rival, Philadelphia.

At the period to which our history has reached, then, there

were three medical schools in our city, each struggling against the other, and neither capable of separate existence. It was under these circumstances that the Regents of the University once more interfered. And it is but just to them to remark that, although occasionally misled among the jarring elements they attempted to harmonize, they have ever shown an earnest and honest desire to promote the cause of medical education. A committee of this body reported as early as April, 1811, "That it had become desirable in every point of view to consolidate the faculty of the College of Physicians and Surgeons with that of Columbia College." "This object," the Committee state, "appears to be one of the first importance, inasmuch as it will assemble, in one institution, a splendid collection of medical and surgical talent; and it cannot fail to merit and receive the patronage of the Legislature. It is unnecessary for the Committee to attempt to display the important advantages to the state which a well-organized medical school in the city of New York must afford. Its hospital and the subjects furnished by the State Prison, without the violation of law, present a field for the acquisition of medical and surgical knowledge unrivaled in the United States; and it is only necessary to establish an institution under the fostering care of the Legislature, in which shall be united the best talent, to secure these advantages to the state."

It was not, however, until two more years had elapsed, that the desirable object was effected. In March, 1814, another committee of the Regents, to whom was referred the Annual Report of the college, reported, "That an arrangement had been made to effect a complete union between the two medical schools, by which all the professors of Columbia College agree to be transferred to the College of Physicians and Surgeons, and that the trustees of Columbia College have consequently abolished the faculty of medicine of that institution." The arrangement thus made was confirmed by the Regents on the 7th March, 1814; and thus, at last, was collected in one school most of the strength and talent of the profession then existing in the city. The consolidated faculty, now become Professors of the College of Physicians and Surgeons, were as follows:—Samuel Bard, M.D., President; Benjamin Dewitt, M.D., Vice-President, and Professor of Natural Philosophy; Wright Post, M.D., and John Augustine Smith, M.D., Joint Profes-

sors of Anatomy, Physiology, and Surgery; David Hosack, M.D., Professor of the Theory and Practice of Physic, and Clinical Medicine; William James McNeven, M.D., Professor of Chemistry; William Hamersley, M.D., Professor of the Clinical Practice of Medicine; Samuel Mitchell, M.D., Professor of Natural History; John C. Osborn, M.D., Professor of Midwifery and the Diseases of Women and Children; James S. Stringham, M.D., Professor of Medical Jurisprudence; Valentine Mott, M.D., Professor of the Principles and Practice of Surgery; John W. Francis, M.D., Professor of *Materia Medica*.

This period is the true era from which to date the stable and fixed existence of this college. It was patronized and endowed by the state, and was duly chartered and authorized by the Regents of the University. It contained within itself abundance of talent and energy; men of various ages, but all of high standing and reputation. Some of these still survive, and while they live, the time has not come to write their eulogies; but of the honored dead I cannot but make a passing notice.

Dr. Post and Dr. Hosack were the two great physicians of their day, to whom the profession in New York deferred as their undoubted superiors. They were rivals in fame and professional practice, and so continued until each retired from the city, to enjoy in the country during their last days, honorable leisure and rest. Eminent as each was in his own sphere, no two men could have been more thoroughly contrasted in their lives and characters.

Dr. Post was quiet, unostentatious, even retiring in his manners. Many accused him, but unfairly, of coldness and want of natural feeling, so little did he allow his ordinary quiet manner to be disturbed; but those who knew him well, and it is my pride and pleasure to have been honored with his friendship,—*we* knew that his heart was not cold towards those with whom he chose to unbend. The profession universally respected and esteemed him. His treatment of even the youngest and humblest practitioner was scrupulously delicate and honorable; he was punctual in every engagement, and thoroughly reliable in every thing he uttered. This character, and this course uniformly carried out, added to his high professional reputation, secured him the largest and best consultation practice of the city. And so decidedly was he deemed first among us, that his opinion, once fairly pronounced in any case, could hardly be



questioned; and bold was the man who would gainsay it. His numerous patients, and among them was included a very large proportion of the first of our citizens in wealth, in character, and in station, gave him a degree of confidence which was most flattering, and their attachment to him was unbounded.

He was, without rival, the first surgeon of his day in our city, and his skill as an operator was admirable; and here, his perfect coolness and presence of mind, as well as his thorough knowledge of anatomy were of vast advantage to him. I can even now see him, as he stood quiet, but collected and self-confident, when, in the New York Hospital, in the presence of almost the entire profession, he was about to tie the carotid artery for the first time in our country. The success of the operation was perfect, and with equal skill and equal success he was among the first to perform similar operations in other large and deep-seated vessels. But although he aimed most at a high surgical reputation, as a physician and general practitioner he was not less eminent; and it was in general practice that he was most largely engaged; for New York could not then, as now, furnish ample occupation in surgery alone. As a teacher, although I have listened to the prelections of some of the best lecturers in Europe and in our own country, I have not heard his superior. When he entered his lecture-room, the most profound silence would reign, and every eye would be fixed on him. He began in a tone so low as to be inaudible; but presently he was heard, in his peculiar quiet, clear, and terse language, conveying all he would say in a manner so easy that all could understand, but in words so few that none could be lost.

The position he held in our city has never since been attained by any other individual; for with the great growth of New York, medical men of vigorous talent and great ability have become so much more numerous that no one person can again attain a rank far beyond all the rest. And long did Dr. Post hold this enviable position. At the age of twenty-three years, in the year 1792, he was appointed Professor of Anatomy in Columbia College, and he continued to hold the office in that and the College of Physicians and Surgeons until 1826. He became President of the College in 1821, upon the death of Dr. Bard. During the greater part of this period, also, he was one of the surgeons of the New York Hospital, where, as in the profession at large, he was still the acknowledged head. He died in June, 1828.



The most distinguished colleague of Dr. Post was Dr. Hosack, a professor whose reputation was deservedly more extensive throughout our country than any other medical man whom New York has produced. Dr. Hosack united to great ability, extraordinary energy and determination. His industry was untiring, and his ambition to rank first, not only in his profession, but also in science and letters, kept him incessantly before the public. In every project for the advancement of either one or the other in this city, he was active and foremost; and whether it was for the interests of the profession or the promotion of any public object, his ready pen and powerful elocution were still at hand. This very ardor and enthusiasm of his character did not, however, always make him friends; for, in the pursuit of his object, he would, sometimes, necessarily encounter opponents. But, in spite of all opposition and every obstacle, he rarely failed to accomplish what he undertook.

As a lecturer, Dr. Hosack was admirable. Earnest, emphatic, forcible, he arrested and fixed attention from the beginning to the end of his discourses. None of his opinions were undecided or feebly proposed; and his firm convictions would most frequently carry away his audience, and make them, for the time at least, of his opinion. But, whether right or wrong, his class was sure to know and remember them.

As a practitioner, his rank was of the highest order. Clear in his perceptions and rapid in thought, he promptly investigated his cases, and as promptly devised the treatment. At this day, his practice would be considered too active and not always safe; but at that period it was deemed excellent, because it was decided and vigorous. He, as well as Dr. Post, was long engaged as a teacher of medicine, having begun his career as a professor of this college in 1807, and closed it in Rutgers' College in 1830. He retired from practice, while in the full possession of all his powers, bodily and mental, and spent the last years of his life in elegant retirement at his beautiful country-seat at Hyde Park, on the Hudson river. Here, his unbounded hospitality brought to his house many of the first men of our country, and he enjoyed to the full the leisure we all hope for as we advance in life, but which so few attain. He died in this city, of apoplexy, on the 24th December, 1825.

With two such men as Dr. Post and Dr. Hosack at the head of the college, aided by colleagues, most of whom have

since taken high rank in the profession, it could not but succeed; and from this period its prosperity was decided and progressive. "The seven subsequent years," wrote one of its faculty, "may be fairly considered the most flourishing period of our college;—every year added to its means of instruction; the number of its students rapidly increased with the opening of each session, and the high reputation of the New York University was recognized in every portion of the Union. The class-room was occupied by more than two hundred students; the language of the Regents, in their Annual Reports to the Legislature, breathed the most flattering expressions of approbation in behalf of the talents and zeal of the professors, and the substantial attainments of the scholars that had been committed to their care."

But prosperous as was the college during these seven years, it even then contained within itself the germs of mischief, which, developing themselves shortly afterwards, eventually brought about the most violent revolution it had yet suffered. Dissensions grew up between the Medical Society of this city and the college; and the Society made formal complaints to the Regents of the University against the professors. The two bodies soon became arrayed against each other in bitter hostility, and the whole profession of the city was divided into two parties, in favor of one or the other of these two. The Medical Society so far gained the victory, that the Regents were induced to appoint as trustees several of its members who had been most actively engaged against the professors.

The dissensions which already existed, were inflamed a hundred-fold when the parties engaged in them were thus brought face to face, in the trustees' room. A formal set of charges was preferred by the trustees against the professors, accusing them of mismanagement of the college affairs, in every variety of mode. Now, that these things have all passed away, and those not engaged in them can look back impartially and judge between the contending parties, it is obvious that although the finances of the college had been most unfortunately managed by the trustees, while the professors formed a large majority of that body, still, the mode in which they were attacked by the opposite party was not such as was calculated to remedy the abuses of which they complained. Although some of the charges against the professors were well founded and sufficiently grave, others

were unreasonable and captious ; and both parties showing themselves in the wrong, the influence of both with the Regents was weakened, and the abuses which existed in the college, were modified, not cured.

These events occurred during the years 1819 and 1820, and the partial improvement in the college affairs which took place, gradually brought about a truce between the contending parties, so that in February, 1821, the Regents, in their Annual Report, congratulated the college that its dissensions had ceased, and harmony been restored. The peace, however, proved unstable. New elements of discord arose, and the trustees became gradually arrayed against the professors, almost to a man. Once more severe complaints are made by them to the Regents, and no less severe rejoinders by the professors ; and, so acrimonious do these papers become, that in one instance the Regents returned one to the professors in token of their disapproval of its intemperate language. The divided house could not stand, and, eventually, the faculty, in despair of carrying on the college with such a powerful opposition within its very bosom, resigned their chairs, in a body. If, as some supposed, these resignations were made with the expectation of forcing the Regents to dismiss the opposing trustees rather than lose the entire body of the professors, the event proved that they had miscalculated their strength. Their resignations were accepted by the Regents, and it was immediately determined that the college should be reorganized, and a new faculty appointed. This crisis in the affairs of the college took place in the month of April, 1826, and an entirely new body of professors was elected by the Regents, in July following. Thus were driven from their posts a body, consisting mainly of the ablest medical men of our city ; long trained to the business of teaching, with reputations as lecturers widely established ; and, with the college under their management, however embarrassed in its finances, still reasonably successful, or with a good prospect of becoming a great medical school.

Although I was one of those appointed to succeed these gentlemen, and although my associates were gifted and talented men, it is due to fair and impartial truth, to say, that this revolution in the college was most unfortunate to its interests. It completes the history of a tissue of scenes of division and discord, which had so long been its bane, and which we trust will never be renewed. But the loss of its eminent faculty was not the only cause which now threatened



the prosperity of our school. Its finances were left in a most wretched condition. Beginning, originally, without any funds, it applied to the state, and received, in the year 1808, a grant of twenty thousand dollars. Subsequently, in the year 1814, after the union with Columbia College, a second grant of thirty thousand dollars was made ; and during the whole period, it continued to receive an annuity of five hundred dollars. If these sums had been really donations of so much money to the college, they would have been ample to have erected its buildings, and furnished all the aids to instruction which were then required. But, unfortunately, the liberality of the state took a very different direction. The vicious system of raising money for public purposes by lotteries, was then in vogue ; and the state, when asked for aid, granted it in sums to be raised by future lotteries, and to be paid out of their proceeds from time to time. It was in this mode the college received its grants. Although requiring the immediate outlay of a considerable sum for college buildings and apparatus, it received only a grant of moneys to be raised at a future time, and at intervals covering a number of years. Of course it was obliged to borrow the money for its present purposes. .

But if the college lost a body of able professors, who were replaced by others who, at the time, had not yet attained the high reputation of their predecessors, at least one good grew out of the change—harmony was restored to the institution ; the constitution of the Board of Trustees was altered ; the professors were no longer trustees, and a majority of gentlemen, not members of our profession, was introduced into its body. This harmony, from that moment, has remained undisturbed ; and trustees and faculty have worked together for the good of the college, with a single eye to its prosperity, for the last thirty years.

The history of our school, as thus far traced, has pointed out how much the defective constitution under which it was governed, led to disorders which were constantly interfering with its prosperity. Its trustees were first the entire medical profession of the city, as collected in the medical society of the county ; a body of more than one hundred persons of every variety of rank and position, and many of them ignorant persons, entirely incompetent to have any voice in the management of a learned institution. This was immediately discovered ; and within a single year, the charter was amended so as to vest the appointment of the President, and other



officers, in the Regents, instead of the trustees. The Board of Trustees was limited in its number to twenty-five, and of these, the President, Vice-President, Treasurer, and Registrar, together with the professors, were *ex officio* members. Indeed, this body, for several years, consisted only of these officers of the college and a few persons not of the profession, leaving its government, virtually, entirely in the hands of the professors. Whatever may have been the facts as to the mode in which this government was administered, it necessarily caused a jealousy in the profession at large, that the whole power of teaching, examining, and conferring diplomas upon students, was exercised by this small representation of their number; and, from this well-founded jealousy, with no doubt some imprudence on the part of the faculty themselves, rapidly grew up the bitter dissensions which terminated, as has been already stated, in a complete revolution in the college.

The Regents had thus learned wisdom from the disasters in the institution, and in finally reorganizing its constitution, gave it the charter under which it has ever since been administered, and which works so happily. The Board of Trustees now consists of twenty-five persons, of whom not more than twelve can ever be physicians, and the rest are taken from other callings in life. The profession at large are in this manner sufficiently represented, and satisfied that nothing can be done in the college without their knowledge, or contrary to their interest; while an infusion into the Board of men of learning and high standing, out of our profession, gives a security to the professor that no measures founded in mere professional jealousy, shall be passed by the Board of Trustees.

As long, then, as sufficient care is exercised in selecting proper persons as trustees, and especially not to introduce into its body any medical men who are likely to become aspirants to the office of professor, the present constitution will work well, and is as perfect as it can be made.

The professors, as being most interested in, and best acquainted with the affairs of the college, are, in general, most competent to manage them; and, therefore, should have the power to recommend everything which is required in the institution; and this power they do possess, and have constantly exercised. For years past, every measure proposed by the professors, has been adopted by the trustees, and granted by the Regents where their consent was required. Every new appointment of lecturer or professor has been made in

the same manner ; and, as long as the Board of Trustees is constituted as it now is, and the professors as prudent as the present holders of these offices, harmony and good order will prevail in our school ; and there will always exist a power to check abuse wherever it may originate, and prevent the growth of evil before it reaches maturity.

The mode of appointing professors, which has prevailed for some years past, is particularly happy. When a vacancy occurs, the professors make diligent search for a successor to the office, and present to the trustees one or more names of persons whom they deem fitted for the station. This body appoints, from among the persons nominated, a lecturer, for a single year, who thus enters upon his office as a probationer for that term. If he succeed in satisfying his colleagues and the Board of Trustees, the latter body recommend him to the Regents ; and, thus far, they have appointed every person so recommended.

Although this plan of appointment is not one originally arranged, but has gradually grown up as the result of experience and circumstances, it is evidently one of the best that could have been devised ; and it has resulted in the formation of the able and distinguished faculty which now exist in the college. And so of the entire constitution of the school. It has gradually been changed, and adapted to the wants of the institution, until it has acquired its present shape ; and we trust, under its guidance, the learning, ability, and zeal of its faculty will rapidly advance, until they have placed the school in a position second to none in America.

Upon the remodeling of the college, which took place in July, 1826, the Regents appointed John Watts, M.D., President ; Thomas Cock, M.D., Vice-President ; Nicoll H. Dering, M.D., Registrar ; John D. Jaques, M.D., Treasurer. Professors.—J. Augustine Smith, M.D., Anatomy and Physiology ; Alexander H. Stevens, M.D., Surgery ; James F. Dana, Chemistry ; Joseph Mather Smith, Theory and Practice of Physic, and Clinical Medicine ; Edward Delafield, M.D., Obstetrics and the Diseases of Women and Children ; John B. Beck, M.D., Materia Medica, and Medical Jurisprudence.

The new faculty entered upon the duties of their stations in November following ; and, truly, they had a difficult task before them. The institution was left to their charge, loaded with debt ; with buildings in a state of actual dilapidation, and in every way unfit for its purposes ; and it was utterly des-

titute of museums or collections of any kind. Nor were the professors allowed, quietly, to perform their new functions. The gentlemen to whom they succeeded, with a degree of zeal and determination which should have ensured success, immediately established, under the authority of Rutgers' College, in New Jersey, a new medical school by the same name. A large and excellent building was erected in Duane street, and finished in time for the next college session; and thus, a powerful opposition to this college started with it upon the very first appearance of its new professors before the public. With their reputations already deservedly established as teachers of medicine, with their previous connections with all parts of the country through the pupils they had been educating for a number of years, and their experience in the machinery of collecting students, the professors of Rutgers' College necessarily drew around them a considerable proportion of pupils. And it was sufficiently creditable to their successors in this college, that they held their positions well and successfully, and drew together excellent classes, which increased every year. It would have been well if the opposition thus established by Rutgers' College, could have been continued and become permanent. The two schools would have mutually benefited each other by competition, as there was room for both. But the rivalry which existed between them was one of bitter and confirmed hostility, and neither could be satisfied with any thing less than the destruction of the other. Accordingly, the efforts of the State School and its friends, eventually succeeded in obtaining the passage of a law by our Legislature, which rendered the diplomas issued by Rutgers' College so manifestly illegal, that it could no longer hope for success, and its professors giving up the contest, the institution ceased to exist.

It was, however, neither possible nor to be desired, that New York should possess only a single school of medicine. All experience shows that every body of men, engaged in any enterprise, require the stimulus of competition to urge them to the amount of effort they are capable of exerting; and schools of medicine are no exception to this rule. In London and in Paris, where exist the best medical schools in the world, there are many associations of men engaged at the same time in teaching medicine; and a sufficient number of them succeed in collecting classes, to keep up a constant supply of the best teachers. There is room enough in



New York for a similar competition. Our city must not be looked upon, in judging of its field of action for any great enterprise, as confined to the island on which it stands, or even as including alone its great neighbor across the East River. By the long arms it outstretches in every direction by its railroads, and steamboats, and canal routes, with all the interior of our country, and its easy communication by sea with the whole Atlantic border, it brings within its reach students from our whole land; and as a field of medical and surgical practice, it has no less limits. How many a practitioner, before he leaves his house in the morning, sees and prescribes for patients from every part of the country lying within one or two hundred miles of the city, laboring under diseases which have baffled the physicians in the country. How numerous the individuals, who have met with severe accidents on our railroads, steamboats, and public and private works of every description, and who are immediately sent to New York for treatment. At this moment, there exists not in the world, from all these causes, a better school of surgery than the New York Hospital. Nor can any place be found where, in private practice, medical men can see a greater number of patients throughout the year than our city. And the number of individuals thus largely employed, and gaining all the skill and knowledge which such large experience alone can give, is great, and much larger than is supposed by those not conversant with the subject; and from this source will always be supplied a sufficient number of teachers for several schools of medicine. And I sincerely hope that the two now competing with this college, will endure and succeed; and as long as they teach well, and conduct their schools fairly and honorably, we will bid them God speed.

And here it will not be out of place to point out some of the means of clinical instruction possessed by New York, vastly greater than exist any where else on this continent. And it is especially valuable to the students who come to our city for instruction, that there are so many situations within their reach, in which they can have patients put actually under their care and management for a season. The mere seeing of patients under the treatment of others, and hearing observations on their cases, is indeed important to pupils, but this advantage in no way compares with that enjoyed by those who reside in the various hospitals and infirmaries of our city, and its neighborhood. And perhaps



most of those even familiar with our institutions, will be surprised to learn the number of these situations. There are at this moment sixty-six young physicians, or advanced students, residing in these institutions, or having charge, more or less, of the patients treated in them, within this city, Brooklyn, and the various islands adjacent to and dependent upon New York. There are one hundred and thirty-three medical gentlemen of more advanced standing, who are the attending physicians and surgeons of these institutions, and fifty-three consulting physicians and surgeons; making altogether two hundred and fifty medical appointments, to which those who are educated in our city, or eventually reside here, may aspire. Every one of these offices places under the charge of its incumbent, large numbers of patients suffering under every variety of disease or accident to which human nature is liable.

I have before me the details which show the medical staff of all these establishments, but I will not occupy your time with reading them. I have stated enough to prove the position I have advanced, that New York possesses greater means for learning medicine by the actual observation of disease, than any other place in our country: and if those who assemble here for instruction will but avail themselves of the ample means thus placed within their reach, they cannot fail, with sufficient industry and talent, to become learned and skillful physicians. A resident in any one of the institutions I have enumerated, may see, investigate, and prescribe for more cases of disease in a single year, than could possibly pass under his observation in ten years of private practice. And thus every year go into our profession many young men already more experienced, and, therefore, more skillful, than thousands of their professional brethren of twice their age.

The remaining history of the college is one of quiet labor and successful effort. For nearly thirty years its harmony has not been seriously disturbed, and it has been honorably and perseveringly engaged in instructing in medicine hundreds of men who are spread throughout our whole country, and in many instances, have done honor to their alma mater. Vacancies in the professorships have occurred from time to time, but they have been filled with care and judgment, by those who made the appointments. We have lost by death several of our ablest professors, since the last great change in the college which I have chronicled. The names of Dana,

of Beck, and of Bartlett, are familiar to most of you, and the very mention of these names is sufficient to indicate the severe loss sustained by our college, at the demise of each one of them. I must leave to others the pleasing task of characterizing them as they deserve—of writing their eulogies; knowing full well that each has left behind a reputation which I could not enhance.

A period of peace and tranquillity affords little materials for history, but it may be, nevertheless, one of continued prosperity. No longer distracted by the broils and dissensions of former years, the college has improved the opportunity by steadily advancing in increasing its means of usefulness. Instead of the contracted and badly arranged building it occupied in Barclay street thirty years ago, it is now established in one which is inferior to none in our country. It possesses a large and well-adapted museum of anatomy, surgery, and pathology, an excellent obstetrical collection, and an abundant series of specimens of the *materia medica*. It has a valuable and well-selected library, to which its pupils have easy access. And in short, all the means for illustrating and enforcing the teachings of its learned and able faculty, it possesses in abundance, and of the best character. And above all, it enjoys a character which none will gainsay, that a diploma granted under its authority is a real evidence that its holder has not only had opportunities second to none in our country for learning medicine, but has actually acquired an amount of knowledge fitting him to begin its practice.

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ART. III.—*On the Localization of Baths, and on the Application of Cold and Heat upon the Different Parts of the Human Body.* By CHARLES MAYOR, M.D., Member of several Scientific Societies.

THE memoirs contained in this paper were originally published in the French language, in the year 1844, at Lausanne, (Switzerland,) having previously been presented to the Academy of Sciences, at Paris, and there favorably noticed. Since then, several medical authors on pathology have mentioned them; among them, Dr. Amusat, in his treatise *On the Employment of Water in Surgery*. This very interesting work has been translated from the French, and published at Buffalo, N. Y., by Prof. Hamilton. The Medical Society of Southern Central New York having expressed a desire to see my work wholly translated,\* in answer to their wishes, I

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\* *Transactions of the Medical Association of Southern Central New York*, for 1854.

present to the medical profession a translation of my work, *On the Localization of Baths*, etc., with such additions as I deemed most useful.

My father, Prof. Mathias Mayor, whose labors for mankind and for science were so useful, has, in several of his writings, highly recommended the use of water in surgery, and has described his method of employing it. Believing that I shall pay a just tribute to his memory, and obtain the approbation of my fellow physicians, I quote a few words from his *Surgery Simplified*:—"Water has been invoked and proclaimed in every age and by the greatest surgeons, as the most important agent in the treatment of most surgical affections, and as the means, *par excellence*, to favor the efforts of nature. It is to be regretted that this opinion, so prevalent among surgeons and physicians, has had so little influence with the people, and especially with military men."

1. *On the Localization of Baths*.—The pathological cases which claim the use of local baths are numerous; but the imperfection of the means employed for their administration has, till now, greatly prevented their use. In fact, the medical art possesses no apparatus suitable to bathe separately the leg, the knee, the thigh, the elbow, the arm, and the forearm. The immersion of the extremities becomes even impossible, when the state of the invalid, or of the affected limb, prevents the displacement of the latter; as, for example, when the articulations of the foot and of the knee are affected at the same time, or when the latter is stiff and immovable. To surmount these obstacles, to bathe separately the various parts of a limb, with the least possible cost and trouble, in the simplest and most convenient manner, while the room of the invalid, and all things surrounding him, are kept free from moisture, and he himself allowed to choose the most comfortable position, such is the problem which I once tried to solve while seeking to bathe the hand and wrist of a person whose arm it was necessary to keep free from moisture, and which could neither be extended nor placed in an ordinary vessel.

A circumstance, which I can but mention with great pleasure, helped me to solve this difficulty. My distinguished friend, Dr. Junot, of Paris, used, in my presence, the *hemospasic* apparatus (of which he is the inventor), the object of which is to draw, in a very short time, a large quantity of blood to the inferior part of the body. I at once concluded that the instrument which he employed, com-



plicated and costly, though very ingeniously contrived, could be supplied by apparatus more simple, at less cost, and which could be constructed in places destitute of the facilities found only in large cities. The labors undertaken for that purpose were successful, and led me to the discovery of means efficient for the localization of baths.

PLATE 1.

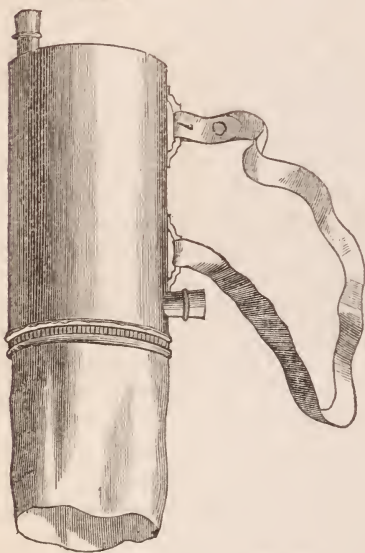


PLATE 2.



PLATE 3.

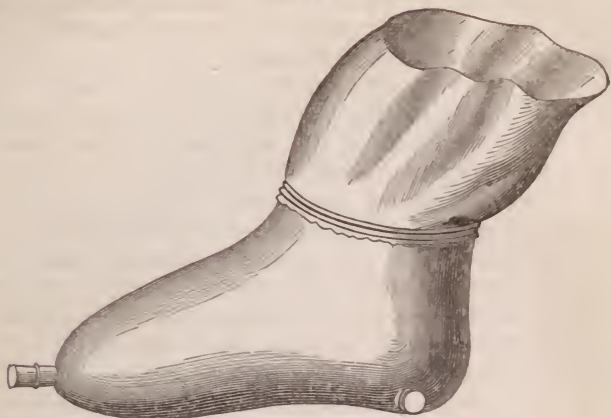


My apparatus consists of metallic vessels adapted to the form and size of the part which they are destined to receive. They terminate in *cul de sacs*, if destined to bathe the extremi-



ties of the limbs, and are open at both ends, if intended to inclose other parts of the limbs, or both hands at once. (Plates 1 and 2.)

PLATE 4.



An apparatus designed for the foot should have the form of a large shoe or boot. (Plate 4.) It should be cylindroid, resembling the tin-cases used for collecting botanical specimens, if intended for the hand ; for other parts of the limbs it should be cylindrical. If the apparatus is intended for an articulation at its flexion, it should consist of two metallic rings placed at the extremities of a sheath made of some impermeable cloth, constituting a cylinder flexible in its middle part, and consequently capable of describing an angle corresponding to that made by the diseased joint. (Plate 3.) When an apparatus designed to bathe a whole limb is thus articulated, the latter can readily execute movements of flexion and extension.

Each vessel has two small openings, the superior one for the introduction of the water of the bath, the inferior one on the side, to empty it. These orifices should have a metallic rim surrounding them about one inch in height, so as to be closed by corks. Each large opening of such an apparatus is provided with an impermeable sheath, very flexible, and five or six inches in length, which, tied around the limb of the sick person, will prevent the leaking of the water. This piece, to which I shall give the name of sleeve (*manchette*), must have a circumference at least equal to that of the opening on which it is to be attached. The vessels designed for the extremities have but one sleeve, the others have two.

I know but two materials suitable to make them of, *india rubber* and *bladder*. To make a sleeve of india rubber, take a

thin, elastic, and very flexible sheet of that substance, and cement its edges together with india-rubber glue. A sheath is thus obtained, one of whose extremities will form the mouth of the apparatus; while the other is strongly tied and cemented, by means of a string and resinous varnish, around a large opening of the metallic vessel.

In the place of india rubber, a hog's bladder can be employed for making this sheath, as it is easily formed by cutting off the two ends of the bladder, after softening it in *cold* or *tepid* water (hot water would injure it). This substance, when sufficiently moistened, becomes very pliable, and is readily applied to the part it should surround. The chief objection to the use of this material consists in its liability to decomposition by continued contact with water; but this inconvenience can be removed by dipping the bladder in a solution of salt or alum after each bath. It can, however, at slight cost be easily renewed. A bladder for renewing this piece of the apparatus, can be kept free from insects, if wet with salt water, blown full of air, and, when dry, folded and stored where mice cannot have access to it. A clear and thin bladder is best for this purpose. A piece of intestine will serve for making apparatus for legs of children, and fingers, etc. Probably other impermeable fabrics could be found which, by their thinness and elasticity, would take the place of india rubber, or of bladder. A resinous varnish can be employed to obtain a water-tight seam, and to cement the flexible cylinder to the metallic ring I have spoken of. The varnish, known by the name of *liquid glue*, will answer for that use.

It is only necessary to look at one of these new bathing contrivances, or read their description, to readily understand their use. For example, if you desire to bathe the hand, it is introduced through the sleeve into the metallic vessel; the sleeve is then secured around the forearm with a band, or by means of a handkerchief folded like a cravat. If intended for the knee, one of the sleeves is placed on the thigh and the other on the leg. The apparatus being adjusted, all that remains to be done, is to close the inferior orifice, and fill the vessel through the other opening with such substance, aqueous, oily, or spirituous, as may have been chosen. The upper opening must then be closed, that nothing may escape from the apparatus. It is evident, that if a vessel with larger proportions were constructed, the two limbs, or even a part of the trunk, might be bathed; and if the apparatus had the

form of a pair of pantaloons, it could be used to bathe separately the seat. The vessels which I have made are of sheet tin, varnished within and without, but other metals, glass, vulcanized india rubber, gutta percha, etc., could be used. Whatever form is given to them, it is important, that the parts of the body they are intended to receive should not be incommoded, and that they should be completely immersed.

I will recapitulate the principal advantages afforded by the apparatus I have now described. 1. These different kinds of apparatus are easily obtained in any place, and at small cost. 2. They enable us to localize a bath upon all portions of the extremities, and without obliging the patient to remove his limb from the bed, or to take a sitting position, which is often fatiguing, and sometimes injurious or impossible. We ought always to be able to select and keep that position which is most convenient. 3. The liquid not undergoing any evaporation, will retain its warmth a long time, especially if we take the precaution to surround the vessel with a bad conductor of caloric. The slight subtraction of caloric, resulting from the coolness of the walls of the vessel, will be compensated for by the heat which the diseased limb supplies to the small quantity of water surrounding it. 4. If we wish to bathe the hand, the forearm, or the arm, the apparatus, if furnished with rings and cords, might, under certain circumstances, be suspended from the neck of the patient, and he could thus be permitted to attend to his business, while he is at the same time continuing his bath (see plate 1). 5. The liquid can be renewed without changing the position of the limb, or cooling the part which is subjected to the bath. 6. Since it is necessary to use but little liquid, the cost of combustible is almost nothing, and the trouble of preparing it is trivial; and, if medicated baths are employed, they will also be attended with but little expense, even when such expensive articles are employed, as the iodurets, the sublinates, etc. 7. The vessel being hermetically closed, prevents the escape of any of the volatile principle which the water may contain. 8. The apparatus having two openings, can be used where we wish to submit a limb, or a portion of it, to a continued current of water. For this purpose we have only to adapt to the upper orifice an elastic tube, communicating with a vessel placed at a height proportionate to the degree of impulse we wish to give to the water. The inferior orifice remains open, or it may be made smaller by inserting



into it a perforated cork, or a faucet. This mode of treatment, intermediate between the bath and the douche, would be useful in some cases.

Such apparatus could frequently be used advantageously in the veterinary art. Dr. Lebert, who was at the head of the medical faculty of the Lavey baths, and who now occupies, as author and practitioner, a very distinguished position in the medical faculty of Paris, had the kindness to address me a pamphlet, which I regret not being able to insert verbatim. It contains the history of the several pathological cases in which he used my apparatus. An extract from this pamphlet is given in a work which my learned fellow member published in 1842.\* From this publication I feel constrained to make the following extract:—

“I have used these baths in a great number of cases, and found them most useful in diseases of the joints. Experience and a consideration of the general indications and nature of the diseases of which I am about to speak, have led me to deduce the following therapeutic indications for their employment:—

“1. *If the teguments are intact.*—Acute or sub-acute inflammatory affections, as for example in the case of felons, inflammation of the ligaments or fibrous structures, either of the feet, hands, or knees, etc., and in general wherever there is severe pain and tension, we ought to employ them to soothe, or even to encourage the bleeding of leeches. Local baths in inflammatory affections, have a soothing and emollient effect when prepared with an infusion of mallows, a decoction of flaxseed, or with an infusion of narcotic plants, such as hyosciamus, belladonna, and hemlock. To these baths laudanum can be added, or liquid acetate of lead, etc., etc., and other remedies according to the individual indications. These baths generally preserve an uniform temperature for a considerable length of time, and possess also, the great advantage of keeping the diseased parts from exposure to the air. But we ought not to continue them more than an hour consecutively, as a longer confinement would incommode the patient.† We have had

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\* *Report on the use of the lavey water during the season of 1841*: by DR. HERMANN LEBERT.

† The inconvenience of which Dr. Lebert speaks can be mostly obviated by giving a sufficient length to the sleeve of the apparatus employed; for then only a slight constriction is necessary, since it acts on a larger surface. It would be almost nothing if the place where the sleeve is attached were higher than the



occasion to observe the soothing effect of local baths, with the water of Lavey alone, in many cases of acute inflammation, and of abscesses occurring during the treatment of articular diseases, white swelling, and caries.

"A second class of diseases in which these baths would be useful, the teguments being in an intact state, are chronic affections of the skin. A person affected with common itch and psoriasis of the hands, has furnished us a striking example. Of all parts affected by these eruptions, the hands were the worst, yet they were the first healed, by the application of local baths. Diseases of the skin, either confined to one, or extending to several parts of the body, can be successfully treated with local baths; but these are also useful when the eruption, though more general, has its seat in some particular part, as in the hands. Every one knows, that other things being equal, we are more anxious to remove an eruption covering only a small surface, from a part exposed to view, than from a larger one concealed by the clothes. Care should be taken in such cases to prevent driving the eruption inward, and general treatment should always be simultaneously employed. In such diseases, the waters of Lavey can be used pure, or mixed with a solution of lac sulphur, of carbonate of potash, the sulphurous alkaline solution of Bielt, a solution of acetate of lead, of sulphate of zinc or of copper, of corrosive sublimate, etc., according to the special indication in each case.

"2. *Diseases in which the teguments are not intact.*—These are chiefly diseases of the joints accompanied by abscesses, fistulas, ulcers in the soft parts, or in the bones. Local baths with pure Lavey water have been especially useful in affections of the bones. I have thought that the absorption of

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part which must be bathed, as is the case when we bathe at the same time the forearm and hand, the sleeve being secured around the superior part of the arm. Besides, this constriction will not be felt at all, when the bath and compression of the diseased limb occur at the same time, two means which can, more than is generally believed, be combined in the most advantageous manner, even against irritations which are inflammatory.

A band made of an elastic material, such as netting or india rubber, sufficiently long to be wound around the whole part which the sleeve covers, will be most suitable to produce a pressure equally distributed, moderate and yet sufficient. This band should be terminated by two pieces of tape.

Impermeable dressings made with cloths, either wet with pure water or with water mixed with other substances, and covered by impermeable cloth, like oiled silk, have some analogy with local baths, but they have less efficacy. My father much approved of that mode of dressing and I have had many occasions to employ it usefully, particularly in 1847, when a number of wounded soldiers were brought to the hospital of Lausanne. It will also be a light, convenient, and cheap substitute for *poultices*, if the clothes are wet with a decoction of flaxseed.

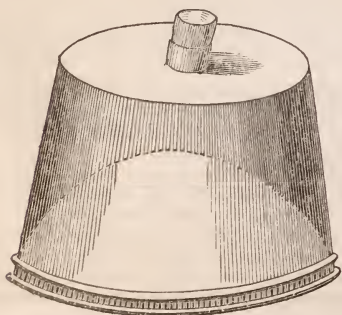
the water in these cases, was greater in local baths almost hermetically closed than in those taken in the ordinary method. In eight cases of diseases of the bones I have seen suppuration promptly diminished, and the condition of the soft parts improved by this treatment. In several cases of white swelling and caries of the foot, the patients could not endure the position requisite for the ordinary foot bath, when they have taken the local baths, with the apparatus of Dr. C. Mayor, without changing their position and while lying in bed."

2. *Application of Cold and Heat upon the Different Parts of the Human Body.*—Cold and heat, as all know, are valuable agents for the treatment of a great number of diseases; and, if their administration is not generally attended with difficulties, the means usually employed for this purpose require some improvement. Those used for refreshing the head, particularly, present inconveniences which it is most important to obviate, as the local use of cold is of great importance in the treatment of the acute and chronic affections of the brain.

Affusions upon the head with cold water can hardly be given except when the invalid is in a bath—a circumstance which very much prevents their use as well as the duration of them.

Continued irrigations, so useful in the injuries of the extremities, could only be applied with great difficulty for the refrigeration of the head. Saturated cloths bring in contact with the teguments of the skull but a small quantity of water, which soon becomes warm, and hence it is necessary frequently to renew them. A bladder filled with cold water has not this inconvenience, but it is difficult to adjust, and it is easily displaced by the least movement of the head. Filled with ice, it has the same disadvantage so soon as a part of it is melted.

PLATE 5.



Having been consulted by a person with a chronic affection, and for which the continued application of cold on the head was necessary, without the necessity, however, of stopping his occupations, I invented the apparatus which I am about to describe, and which I think will prove a convenient substitute for those whose disadvantages

I have enumerated. This apparatus (Plate 5) which I call a *Refrigerant Casque* consists of a tin vessel, varnished within and without, and having the shape of a hat, which, instead of the rim, should have a small border of about the twelfth part of an inch. The interior part of this recipient consists of a cap of some impermeable cloth, strongly cemented and fastened by its edges to those of the vessel. This cap will adjust itself to the head when the apparatus is worn by the patient. It can be made by uniting with a varnished seam (see the preceding memoir) two leaves of vulcanized india rubber cut in the shape and size necessary to fit the head. This metallic helmet has upon its top a vertical orifice about one inch in diameter, from which a rim rises three quarters of an inch in height. This orifice to which is adapted a cork, is used for the introduction of the water or ice which it is designed to contain. The whole height of this helmet is about six or seven inches. An apparatus thus constructed, having a sufficient diameter, can be used for heads of all dimensions; but if one finds it necessary to use such an apparatus for any length of time, it will be more convenient to have one constructed which will exactly fit his head. To obtain a correct measurement for this purpose, the horizontal circumference of the head is taken with a tape passing over the lower part of the forehead. The length thus obtained, with half an inch added, will give the interior size of the helmet. I need scarcely add that, if desired, the form of this helmet could be varied, and its presence concealed either by covering it with a hat or bonnet, or by giving it the complete appearance of any other head-dress. Sheet copper, boiled leather, vulcanized india rubber, gutta percha, or any other substance, at the same time solid, flexible, and impermeable, can be substituted for tin.

This apparatus, with which I have obtained good results, recommends itself by its simplicity and cheapness. As it can contain about half a gallon of water, it will not be necessary to renew its contents frequently. The weight of the water is felt only when the patient is seated or standing. To prevent its becoming uncomfortable, but a part of the vessel might be filled; when the head is upon a pillow, it will support the apparatus. Under some circumstances it could be conveniently suspended. The construction of this apparatus prevents the escape of moisture upon the bed or clothes of the one using it, and he is enabled, under some circumstances, to attend to his customary business. This



casque exactly surrounds the head and covers a large surface, advantages not possessed by bladders and other means generally employed for the same purpose. I have even observed the contents of the casque to be renewed without awaking the invalid, it having first been emptied by means of a syphon or faucet.

PLATE 6.

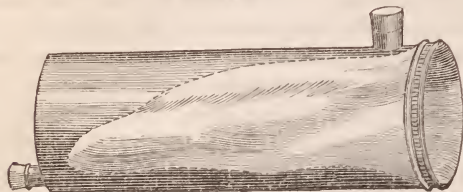


PLATE 7.

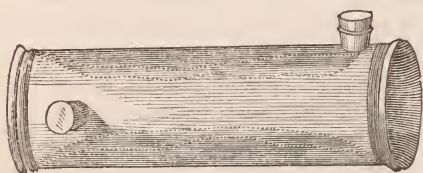
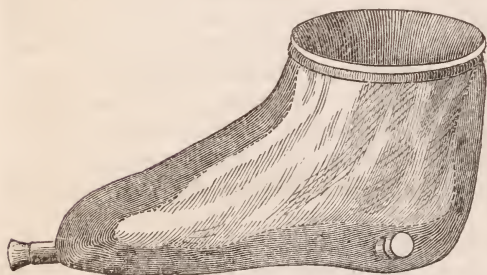


PLATE 8.



Apparatus, wide but not deep, could be applied upon the teguments of the trunk, filled as might be required, with cold or warm water. These must first be covered with a wet cloth, if the simultaneous action of heat and moisture is required. Apparatus, whether designed for the application of cold or heat on the limbs, as I have already observed, is based on the same principle. In either case each vessel must consist of two parts, one exterior and metallic, while the other made of impermeable cloth, is intended to sur-

round exactly the diseased part, and to separate it from the water which furnishes or removes caloric, as it may be warm or cold. The liquid is introduced between the two parts, and can be renewed as often as needed. This apparatus is analogous in most respects to those used for local baths, which I have described in the preceding part of this paper; for they differ from them only in the disposition of their flexible parts. Vessels destined for the extremities, instead of a sleeve, have an impermeable sac, of a form and capacity proportionate to the part upon which they are to



be applied. The mouth, as with the cap of the casque, must be glued and tied upon the borders of the large opening of the metallic vessel.

In cylinders, simple or articulated, destined for the limbs, an interior sheath should be substituted for the two sleeves. This sheath, fixed at its extremities to those of the vessel, should have such dimensions, that its sides approach and almost touch each other from the effect of the pressure of the water. A diseased member, introduced into this tube, with double sides, will thus be surrounded with water on every part, without, however, being in contact with the liquid. Whatever may be the apparatus used, the water must only be introduced when the part to which it is applied has been placed in the vessel. (Plates 6 and 7.)

These bags or sheaths are made and attached to their appropriate vessels, as is the cap of the refrigerating helmet. The flexible parts of these apparatus can be made from a bladder, by cutting off both extremities if a sheath is needed, or only one if you wish to form a sac. But, on account of the width of the casque, it would be difficult to make its cap from the half of a bladder; and vulcanized india rubber will be generally much preferable to bladder for making the kind of apparatus we now speak of.

The apparatus I have now described possesses the following advantages:—1. It can be exactly applied upon all points of the part which is submitted to the action of heat or cold. 2. It permits the invalid to take the position most convenient for him, and even to change it at his pleasure. 3. The liquid can be removed without disturbing the invalid or breaking his slumber.

My father and I have both experimented upon the usefulness of this kind of apparatus, when cold applications were necessary after a surgical operation.

Where, on the contrary, it is expedient to warm quickly the lower extremities of persons who are obliged to keep their beds; I have obtained good effects by using vessels, into which the feet can be placed, and having consequently the form of a large shoe or boot. (Plate 8.) All the varied forms of such apparatus can be modified at the will of the physician, and applied to the different cases which demand their employment.

ART. IV.—*Case of Cysticercus Cellulosæ, with Remarks.* By E. SCHILLING, M.D. A paper read before the Society of German Physicians of the City of New York, November 6, 1856. Translated by M. BLUMENTHAL, M.D., Physician to the Jews' Hospital, New York.

A German woman, æt. 31 years, was received at Ward's Island Hospital, in 1853. She was subject to epilepsy, and appeared very stupid. She was, however, not deranged; but understood everything that was said to her, and her answers were not disconnected, though very imperfect and unreliable. Her manners were those of a hysterical woman, and her appearance was that of a person who had become much reduced by external circumstances. She had neither friends nor acquaintances, and it was totally impossible to get any reliable data as to her previous history.

The epileptic attacks were very irregular in their occurrence, and never lasted more than three or four minutes, and were always preceded by a marked aggravation of a severe headache, to which she was more or less subject all the time. On the frontal bone a prominent cicatrix was seen, under which, however, no depression of bone was discernible, but from which point the severe headache appeared to radiate; and which, in fact, was looked upon as the primary cause of her disease. As she was harmless and willing to assist in light work, she was retained on the Island eighteen months. In September she complained of more headache than usual; had frequent epileptic convulsions, and in one of them suddenly expired. I attended this case with Dr. F. Simrock.

We had expected, upon making the post-mortem examination, to find some lesion of the brain or upon the inner surface of the bone corresponding to the external cicatrix, but we were disappointed; the entire bony arch, as well as the outer surface of the dura mater appeared normal; but its inner side, as well as the surface of the brain, was literally covered, at several parts, with small tumors to the amount of several hundreds, of about the size of a pea; many of them were adherent to the under surface of the dura mater, being suspended as by a pedicle, and could be lifted from off the brain with the dura mater, leaving corresponding depressions in which they had rested upon the convolutions of the brain; others of these small tumors were lying free either upon or between the cerebral convolutions; and even in the substance of the brain, throughout, there

were these same bodies abundantly disseminated, so that there was no portion of the cerebrum in which some were not imbedded, being most plentiful about the choroid plexus. These bodies appeared different in different locations; those imbedded in the cerebral substance represented regular, smooth, transparent, round serous vesicles, of the size of a pea, while around the choroid plexus they were even as large as a bean, within which a lenticular whitish nucleus was discernible. Those upon the cerebral convolutions and adherent to the dura mater were smaller, more resistant, less translucent, and less regular in form. In the muscles of the otherwise normal heart we found five of these bodies with very thickened walls. The same were likewise found in the gluteal and deltoid muscles of the right side; those found here being inclosed in a vascular membrane, or covering of two or three lines in thickness. The liver was normal; and in the intestines no traces of *tænia* were to be found. The specimens presented consisted of a small part of the dura mater, on which about one dozen of these tumors adhere, and of some loose tumors taken from the muscles and of a part of the heart, where one of these tumors was imbedded.

On making a microscopic examination of these small bodies, it was found that in the largest number of those vesicles taken from the brain, the lenticular whitish central point was protruded, or else could be pressed out of the vesicles, and then appeared as a regular but folded cylinder with a blunted point, upon which four points and a double row of circular hooks were discernible; and under a magnifying power of ninety, the circle was even yet observable in specimens which had been preserved in alcohol. Many of the vesicles appeared contracted and atrophied, and contained very imperfect forms of the above named nuclei; some indeed appeared filled simply with chalky substance.

The small bodies above described evidently belong to that species of the animal kingdom known as *parasites*; they are, in fact, specimens of the *cysticercus cellulosæ*; and as the genetic conditions of these animals are so little known, it may not be without interest to draw up a *résumé* of our knowledge, so far as researches and experiments up to the present time have placed it within our reach. Lebert, Von Siebold, Küchenmeister, and Leukart, are the principal sources from which I have drawn the following experiments, facts, and deductions. The *cysticercus cellulosæ* has been described as follows, by M. M. Follin et Ch. Robin



(1849) :—when the body of the parasite is retracted into its caudal vesicle, one can see only a round dilatable foramen, through which the living animal protrudes its head. Upon the inner surface of the caudal vesicle, which is filled with a clear serous fluid, and around the just named foramen, there is placed in a depression in continuity with the tissue a spherical vesicle of the size of a small pea, which is immersed in the serum of the caudal vesicle, and is of the same structure. At the base of this small (nuclear) vesicle, upon the inner surface, and directly opposite the foramen, the body of the animal is imbedded in continuity of substance upon a narrow and curved pedicle.

The body consists of the pedicle and of a plicated membrane regularly and transversely striped, into which the neck and head of the animal is retracted. The neck is smaller than the body and less regularly striped; the head is larger than the neck but smaller than the body, and has four imperforate suction ducts on its sides. In front of the head and in the axis of the body is a small movable tuberosity, which also appears imperforate, surrounded by a double circle of from twenty-four to thirty-two tenaculi, a larger and a smaller alternately. The animal has neither digestive nor generative organs. The caudal vesicle consists of a finely granular homogeneous substance, of a peculiar appearance under the microscope. The structure of the walls of the body is the same as that of the vesicle, only differing in this point, namely, they contain numerous small granules composed of phosphate of lime.

The *cysticercus cellulosæ* consists, therefore, of a semi-transparent elliptical vesicle, varying in size from a lentil to that of a cherry, which contains a serous fluid, and the body and head immersed therein. The entire cylindrical worm, or parasite, is from four to ten millimetres long, stretching after death so that it is longer than the thirteen millimetre-wide transverse plicated fold or ampulla. The occurrence of these parasites is notoriously most common in the pig, and next in the muscles of the dog and deer. They are also found in rats, bears, monkeys, and in man. In the human subject, the animal has been found most frequently in the subcutaneous cellular tissue, in various groups of muscles of the body and extremities, in the substance of the heart, in the brain, and in the eye. In each of these different regions of the body, according to, and depending upon, the space allowed for development, the *cysticercus cellulosæ* takes on different

forms and attains to different sizes. Thus, in the cerebral ventricles and in the eye, the caudal vesicle sometimes attains the size of a walnut, and sometimes duplicate or alternately constricted forms. Sömmering was the first who observed this parasite in the eye of the living subject (human). Baum, Esthlin, Hœring, and Sichel, found it between the conjunctiva and sclerotica, and could easily extract the same by an operation. Sömmering and Schottl discovered it first in the anterior chamber of the eye. A. Von Graefe has minutely described such a case. Von Graefe found it first in the vitreous humor, and in four cases upon the choroid. In the eye the animal is often distinctly discernible, causing sometimes entire loss of vision. The occurrence of the cysticercus cellulosæ in the brain has been more frequently observed. Lebert describes three cases from his own experience, all of which were accompanied by epilepsy.\* The presence of these parasites cannot be diagnosticated, as the symptoms are those common to irritation and inflammation of the brain; or, such as arise from pressure upon certain sections of the brain or sets of nerves, causing epileptic convulsions. The existence of the parasite in the brain is certainly a source of great danger, inasmuch as a *single one* may prove fatal by exciting inflammation around itself. A. Stich (in the Annals of the Berlin Charity Hospital, 1854) describes a case of this kind.

The author of this paper also observed a similar case. A German emigrant was seized on board ship with dizziness and headache; an emetic was administered; hemiplegia now supervened; he was brought into the hospital at Ward's Island, and died after a few days. The autopsy revealed a cerebral abscess, in which was found a shriveled-up cysticercus cellulosæ.

The occurrence of cysticercus in the heart is, by no means, unfrequent, and usually produces no recognizable symptoms. M. Leudel, however, describes a case (in 1852) in which the existence of cysticerci in the heart muscles, some of them protruding into its cavities, caused endocarditis.

The animal frequently dies (either primarily, or secondarily through the effects of inflammation of the surrounding

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\* Besides the case described at the head of this article, I presented to the Society at its meeting of May 26, 1855, a preparation consisting of numerous cysticerci, taken from off the pia mater of a young girl that had suffered from chorea, and who had died under symptoms of laryngismus.

tissue); the caudal vesicle then collapses, its contents become opaque and yellowish, the animal softens and dissolves, the tenaculi and chalky granules become free, the entire mass then thickens, and, finally, becomes a chalky concretion, around which the external membrane shrivels and becomes atrophied.

The existence of the cysticercus, for instance in the swine, (gargol) was well known to the ancients; Aristotle speaks of the "measles" of the swine (*χαλαζή*) as familiar objects known from the earliest ages. Possibly the frequent occurrence of this disease in the Oriental countries belongs to the causes which occasioned the interdiction of the use of pork among the Hebrews and other Oriental nations. That this "measles" belongs to the animal kingdom was, however, entirely unknown until towards the end of the seventeenth century; they were universally believed to be products of disease.

Redi, of Florence, in 1684, the first discoverer of the acarus of itch, was the first who publicly declared the cysticercus to be an animal organism. Hartman, a physician of Königsberg, Prussia, observed first in 1685 the movements of certain cysticerci in warm water, and Tyson, of England, (in *Philosophical Transac.*, 1691,) appears to have been another independent discoverer of the animal nature of the cysticercus.

These discoveries, however, appear to have gradually fallen into oblivion again until Pallas, in the year 1760, presented in his inaugural dissertation (*De Infestivis Viventibus intra Vientia*) the first description and the natural history of these curious and interesting animals. He looked upon the cysticercus as an independent and separate form of the *tænia*, and gave it a place as such (*tænia hydatigena*) in the zoological system. Pallas further proved that the cysticerci, all of them without exception, agree with the *tænia* in the essential elements and features of their structure, especially that the heads of the animals were provided with an identical circle of tenaculi and suction-ducts.

In the year 1782, a parson named Gøetz, of Quedlinburg, in Hanover, Germany, in an essay upon the natural history of intestinal worms, expressed himself to this effect, namely: That certain species of *tænia* and certain species of hydatids are connected. He was aware, for instance, of the identity of the cysticercus fascicularis of the mouse and the head of the *tænia* of the cat (*tænia crassicollis*), and their identity was accepted, and connection believed from this time on for



twenty years. When, however, Zeder in 1803—and the great Rudolphi—expressed their opinions in favor of a division between hydatids and *tænia*, and the latter (Rudolphi), in fact, put down Zeder's family of cysticerci as a separate *order* opposite to the *tæniæ*, the question was considered as settled for at least forty years. It was considered an independent creature, produced—*ex generatione æquivoca*.

About the end of the last decennium, however, under the impulse of a series of important discoveries, zoology underwent an astounding revolution. New ideas gained ascendancy. It was necessary to become convinced that our conception of species could by no means be restricted by the limited evidence of complete identity; convinced that even the natural history of the helminthiæ could present a series of wonderful metamorphoses and peculiar conditions of development, and that *generatio æquivoca* was but a fiction of the imagination.

Already in 1842, Steenstrup, the celebrated discoverer of the alternation of generation,\* attempted to throw doubts upon the independent individuality of the hydatid, and Dujardin, in his *Histoire Naturelle des Helminthes*, 1845, considers the hydatid simply as a juvenile condition of the *tænia*.

At this time, Creplin discovered that the hydatid found in the stickle back, the living neuter, (without sex,) *tochistocephalus dimorphus*, becomes changed in the intestines of the birds of prey of his host, into the complete cestodes *tricuspidia nodulosa*. Von Siebold applied this fact to other hydatids, and says that the cat becomes affected with *tænia crassicolis*, by means of the rats and mice which she devours, and in the livers of which a *cysticercus fascicularis* is seated, and declares (in *Wagner's Manual of Physiology*, 1845,) the hydatids to be lost, misplaced, undeveloped, and degenerated *tæniæ*, whose body degenerated into a bladder (become dropsical) without producing any generative organs.

These hypotheses, however, were doubted by many, inasmuch as no one had as yet presented any direct evidence in their favor. It was, consequently, a very fortunate idea of Küchenmeister, in Zittau, Saxony, to institute experiments on this point. Their results were decisive. He succeeded

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\* By alternation of generation, Steenstrup understands that phenomenon in which an animal produces young which are dissimilar to their mother, and remain so, but which in their turn produce young which themselves or else their progeny take the form of the primary pair.

(see *Prague Quarterly*, 1852,) in metamorphosing the *cysticercus pisiformis* of the rabbit into a common *tænia* in the intestines of the dog.

Numerous experiments were now made. Von Siebold and others fed dogs and cats upon the *cysticercus pisiformis* and *fasciolocularis* of rats and mice, and produced in them the corresponding forms of *tæniæ*. Küchenmeister, Häubner, Esherich, etc., transplanted the *cysticercus cœnurus* of the sheep, and produced the *tænia cœnurus* in the intestine of the dog; and, finally, Küchenmeister induced a condemned criminal to swallow a certain number of the *cysticerci cellulosæ* at various periods before his death (extending from seventy-two till twelve hours before execution), and found, forty-eight hours after his death, upon autopsy, ten young *tæniæ*, upon *four* of which the tenaculi of the *tænia solium* were distinctly visible.

It is, therefore, proven beyond a doubt, by these and other experiments, that certain hydatids are metamorphosed in the intestines of certain animals into *tæniæ*, whose heads and circle of tenaculi are identical. The process of metamorphosis is, in short, the following:—A living hydatid having reached the intestine in man or a certain animal, the caudal vesicles disappear, or the flattened, disjointed appendices thereof, and out of those scolices attached to the intestinal tube, the so-called head or basis of a colony of flattened sections is formed; each of these sections is separated from the other by a constriction or joint, and, therefore, called a link or portion, as their aggregate is a colony and termed a *tænia*. Those joints nearest the head are small, and apparently without signs of ability to produce a germ. The succeeding generation generally shows evidences of rudiments of sexual organs, and a tendency to produce germs for the propagation of the race; then follow sections with more and more clearly marked embryos; and in the last link, we find fully developed embryos enclosed in various layers of shells, being sometimes solitary in the shells, and sometimes aggregated; and which, are ejected from the body, mostly still enclosed in the section or capsule in which they are formed.

How long such a colony or stock may remain in the body is unknown, although the period of duration may be counted by years, during which time the body of the colony loses continually either the last sections or links, or even the whole colony up to the body proper, whose existence and retention in the intestine are alone sufficient to regenerate anew the entire colony.

The *cysticercus cellulosæ* is the hydatid for the *tænia solium*. Man becomes affected therewith chiefly by their introduction into the system by eating pork. In persons who are fond of, and often eat raw pork, sometimes thirty to forty of these tapeworms have been found.

The perfect *tænia solium* is from five to ten yards in length, and its perfect joints six to thirteen millimetres wide. It is of a dirty grey color, inclining to brown. Besides the already named four suction tubes, its head (scolex) has twenty-four to thirty-two tenaculi, placed in double rows, and enclosed in pouches or bags. The flat body (composed of a double membrane) shows at first only traces of, and afterwards more marked divisions, with interspaces between them, and are generally hermaphrodite, seldom without gender. When the first, we discern a penis, a glans penis, spermatic cord and scrotum, and a vagina, uterus, and appendages. The uterine branches, amounting to from five to ten on each side, end in the body, sending branches in various directions in its course.

The vascular system consists of four horizontal branches, running along the sides of the tapeworm, two on each side, which appear to have valves or ciliated epithelium.

The ova are brown, rough externally, nearly round, being about .016" in length and breadth, and contain a small embryo, i.e. a hyaline vesicle with six tenaculi.

The independent life of the links or sections of the tapeworm (called *Proglottis* by Dujardin), has been long insisted upon; they possess separate and independent motion. Pallas already observed their creeping several feet up the walls of a room. They possess the ability, even when separated from the body, to exist for a long time fresh and unimpaired, and in the white of egg they may be transported and retain their vitality for weeks. These sections separate from the body and deposit their ova\* (sometimes already inside the intestinal tube, though generally not) occasionally while creeping upon the floor. They (the ova) are discharged with the excrements. Even after the death of the *Proglottis*, the ova retain their vitality for a time.

What becomes of the proglottides and their embryos? When do the latter escape from the ovum? Is it probable that some truly lose their track, and become hydatids, while others, namely, those that enter the intestinal tube, are developed into *tæniæ*?

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\* As many as 1,000,000 of ova have been found in one *tænia solium*.



To these queries even, modern research and experiment has supplied answers. Küchenmeister was not content with proving that hydatids become developed in the intestinal canal of certain animals, after losing their caudal vesicle, into *tæniæ*, but he denied the doctrine of Von Siebold, namely, that the hydatids are lost and degenerated *tæniæ*, or that they are at all specimens of abnormal development. He considers them as the larvæ of certain *tæniæ*; he takes the caudal vesicle to be a provisional organ (for nutrition and germination), suitable to the conditions of life of the larvæ, and asserts that *all tæniæ*, without exception, were developed from, and in fact had been, hydatids. Von Beneden and Steenstrup agreed in these opinions, but it was reserved for Von Siebold to place beyond a doubt, in his beautiful dissertation on the alternation of generation in the cestodes (in *Journal of Scientific Zoology*) that the cestodes in their development uniformly pass through various hosts; that they emigrate in the form of simple embryos with four or six tenaculi, still enclosed in their eggshells, and only later again return to their original hosts, having in the interim, as cysticerci, formed the head (scolex) of the so called *tænia*.

This process Stein first observed in 1853, in the larva of the *tenebrio molitor* (mealworm), and informed us to the effect that these embryos, after their transmigration into the intestine of the animal, escape from their membranes, perforate the walls of the intestine, and then after the loss of their tenaculi, locate and enclose themselves in the body of the animal. During this enclosure, after a time, the head or scolex is produced within it. Stein, therefore, asserted with right, that the cysticercus represents nothing more than the second stage of embryonal development of the *tænia*.

That this observation applies not only to the hydatids of the mealworm, but to all forms of *tænia*, even to all cestodæ, have been sufficiently proven by the ample and copious researches of Guido Wagner (see *Transactions of Royal Leopold Carolinian Academy*, 1854), and this point of the embryonal condition and nature of the hydatid, is therefore incontrovertibly established. It came now to be of importance to prove by direct experiments the correctness of these relations in all instances, in other words, to adduce evidence that the ova of the respective *tæniæ* are really—constantly developed into hydatids. It was again Küchenmeister, who, at first alone (in 1853), and afterwards in asso-

ciation with Professor Häubner (1854-55), supplied the facts. They succeeded, by feeding certain animals upon certain kinds of *tæniæ*, in developing almost all known forms of hydatids; thus they produced, and sometimes in enormous numbers, the *cœnurus* (by means of *tænia cœnurus*) *cysticercus pisiformis* (from the *tænia serrata*), *cysticercus tenuicollis* (from the *tænia tenuicollis*), *cysticercus cellulosæ* from the *tænia solium*.

Numerous repetitions of these experiments by Van Beneden in Belgium, Escherich in Copenhagen, Røell in Vienna, Gurlt in Berlin, Rudolph Leukart in Giessen, having constantly produced the same results, the question in regard to the genetic relations of *tæniæ* and hydatids may be considered as settled. It appears a fact, that the ovular membranes which contain the embryo, so soon as the ova in some way or other reach the intestinal canal of an animal, and never sooner, burst, as it appears, through a process of digestion, and the small creatures are thus set free. The embryo does not however remain in the intestine to be developed into *tænia*, but makes a way for itself with its six tenaculi, the front two of which are approximated into the form of a wedge, and serve to make a perforation, while with the others it is pushed onward through the walls of the intestine, and then migrates into the neighboring, or even distant cavities, muscles, and other tissues, excepting no portion of the animal body, not even the bones and their medulla. These migrations, as well as the traces they leave, have been observed in several species of the cestodes. Similar embryos have also been discovered in the blood, and termed *hæmatozoæ* by Eckel, Wedle, and Leydig. Rudolph Leukart succeeded four different times in experiments undertaken with special and sole reference to this point, by feeding certain animals with the embryo, in discovering and demonstrating the same in the portal vein, *unaltered* with its perforating apparatus; and we must suppose that they accomplish their journey at times through the vascular system, traveling with the circulation through the larger vessels, as the vena porta, and vena cava inferior; if so, many a problem in regard to their localization in different organs, as the liver, etc., would be solved.\* Once located, these small vesicles or bladders

\* In most species of the *tænia* it is necessary that the embryo be transferred to another animal in order to produce the hydatid. But in the case of the *tænia solium* it is possible, that as the *cysticercus cellulosæ* and the *tænia* occur in the same individual, the embryo of the *tænia solium*, when its ripe proglottis reaches the stomach itself, may produce cysticerci.

enlarge by the absorption of nutritive fluids, and after the lapse of a little time they contain, according to the species, one or more small turbid points upon their inner wall; and then the scolex or scolices finally sprout forth. Consequently the cysticercus is nothing more nor less than the necessary and natural second stage or period in development of the tænia from its embryo.

It is therefore proper to distinguish five different conditions in the development and history of the tænia: 1. The embryo with six tenaculi. 2. The cysticercus. 3. The scolex. 4. The jointed tænia, (strobila) and, finally, 5. The independently living and sexually developed joint or section (proglottis). The development of the cestodæ presents us therefore with a true instance of alternation of generation. Three different generations succeed each other in these animals:—the embryo with six tenaculi, as great nurse; the scolex, as nurse; and the isolated living proglottis, as the generic animal. The great nurse is the product of sexual development; she has her origin in the germinated ovum; while the two other generations are the products of budding or sprouting; the nurse from the grand nurse; the generic animal from the nurse. The intermediate conditions of cysticercus and strobila must be characterized as polymorphous colonies. The strobila might be compared to a colony of polypi, in which each individual is growing out of the posterior body of the scolex, their native soil, thus forming but one and a continuous line. Such a treble alternation of generation is also found in other animal organisms. Thus, Van Beneden and Van Siebold have already pointed out the analogy of development in the cestodæ and the trematodæ, in which the radiæ are developed from the flickering embryo, by means of germination within itself; and the cercariæ take their origin likewise in the same manner from the interior of the radia. This, however, must not be mistaken for the long known metamorphosis, e. g. in the frog, or in most insects with their larvæ, chrysalis, etc. By the alternation of generation, the generic animal produces *only* an unsexual race, which is dissimilar to its parent, and remains so; and this generation produces, by budding, generations of new animals, which, either themselves, or in their offspring, return to the original form of the stock; whereas, in the metamorphosis, the generation originally dissimilar to the parent gradually returns through changes of form to the form of the parent, and has not the power of propagation until it has passed through the prescribed metamorphosis.



From No. 89 of *Edinburgh Medical Journal*, for December, 1856, page 560, we take the following:—DR. RIECKE *on the production of the tænia, considered in relation to public hygiene.* It has been well proved by the experiments of Küchenmeister, that individuals fed on pork tainted with “measles,” and containing the peculiar entozoon, called *cysticercus cellulosæ*, become subject to tapeworm. Various German writers have supposed that these entozoa are destroyed by boiling, salting, and smoking the pork; and Dr. Riecke, of Nordhausen, has published a paper in which he recommends the prohibition of the sale of pork, unless it has previously undergone these processes. In support of his views, he states that *tænia* is an exceedingly frequent complaint in the neighborhood of Nordhausen, where there is a large consumption of raw pork by the people; and on the other hand, that at Altmärk, where this practice is not prevalent, he has only seen six cases of this disease among about ten thousand patients who have been under his care during a period of fourteen years. He, therefore, considers that, in order to prevent the spread of this parasite, all pork should be prepared by salting and smoking before it is sold, or permitted to be used by the people.—*Henke's Zeitschrift*, 3. 1855.\*

ART. V.—*Notes on some of the Relations of the Medical Profession to the Insane.* BY M. E. WINCHELL, M.D., late Assistant Physician to the New Jersey State Lunatic Asylum.

*Medical Education.*—In every incorporate medical school there should be a course of instruction on psychological medicine. This course should be sufficiently comprehensive to meet every emergency which can be presented to the general practitioner. It should be held almost as essential to the attainment of a degree and due qualification for the responsibilities of general practice, as any of the prescribed courses. A ruined intellect is even a greater calamity than a shattered physical organism alone. The mind will sometimes act normally though united with a disabled body, but a sound body is useless without an intellect to govern it. Now, we are taught to look upon

\* In connection with the production of *tænia* by eating raw pork, the reader is referred to an excellent paper by Professor Allen Thompson, *Glasgow Journal*, July 18, 1855; and also to Dr. Crichton's case, *Edinburgh Monthly Journal*, June 18, 1855. Professor Bennett entertains doubts (very justly, we think) as to whether the salting of pork is capable of destroying the vitality of the *cysticercus*. See his paper.—*Ed. M. J.*, Feb. 18, 1855. (*Trans.*)

such diagnostic symptoms as typhoid delirium and congestive mania as the ultimatum of the theory of insanity, and left to gather what knowledge we acquire, often, from the most deplorable experience. Among the works of Pinel, Esquirol, Spurzheim, Prichard, Beck, Ray, and a host of others, are found full and elaborate treatises on mental alienation, but not one of them is required in a preparatory course of reading, and our graduates are sent out as illy qualified to "minister to the mind diseased," and guard one of the most vital interests of humanity as though mental derangement was unknown. Insanity is not merely a symptom. It is sometimes a specific disease; and in all such cases requires a peculiar treatment; and as it invariably comes first under the notice of the general practitioner, he should clearly understand his duty in such cases, and be prepared to execute it promptly and intelligently. He should know *when* his patient is suffering with specific insanity, as well as how to advise; and a few remarks on this subject we hope will not be misappreciated, but tend in some degree to promote the welfare of that unfortunate class to which considerable of our time and attention has been devoted.

*Importance of Early Treatment.*—It is of the first importance to know *when* a person is insane. That form of mental derangement consequent upon febrile and typhoid conditions or accompanying any acute cerebral disease or lesion of the brain, and which generally passes away with the physical derangement, is easily recognized by every practitioner, and is not inappropriately styled symptomatic insanity. But there is another form in which it often eludes the closest scrutiny of the inexperienced observer for months, and even years; and for lack of timely detection and prompt treatment, the subject of it becomes a confirmed lunatic; his happiness and intellect a hopeless wreck. This form may be styled, for the sake of distinction, idiopathic insanity, and it is with this that we have principally to deal. It is a fact familiar to every one accustomed to the care of the insane, that the probability of recovery bears an inverse ratio to the duration of the disease, and that the earlier proper treatment is adopted after the first aberration of reason, the greater are the chances of recovery, and the earlier the probability of that result. In confirmation of the fact that the probability of recovery diminishes as the duration of the disease increases, the following extract is made from the per cent. table of the Report for 1855 of the State Lunatic Hospital, at Worcester,

Mass. This table embraces 2,284 cases, and covers a period of twenty-one years.

|                                         | 1834 | 1835 | 1836 | 1837 | 1838 | 1839 | 1840 | 1841 | 1842 | 1843 | 1844 |
|-----------------------------------------|------|------|------|------|------|------|------|------|------|------|------|
| Per cent. of recovery of recent cases.. | 82   | 82   | 84   | 89   | 86   | 90   | 91   | 91   | 91   | 88   | 93   |
| Per cent. of recovery of old cases ---- | 20   | 18   | 19   | 25   | 15   | 17   | 22   | 21   | 16   | 29   | 24   |
|                                         | 1845 | 1846 | 1847 | 1848 | 1849 | 1850 | 1851 | 1852 | 1853 | 1854 | 1855 |
| Per cent. of recovery of recent cases.. | 89½  | 79   | 72   | 86   | 84   | 87   | 82   | 77   | 83   | 80   | 92   |
| Per cent. of recovery of old cases ---- | 31½  | 28   | 17   | 19   | 24   | 21   | 18   | 18   | 24   | 29   | 17   |

The average recovery of recent cases, by the above table, is eighty-nine per cent. The average recovery of old cases, by the same, is twenty-two per cent.

This table alone is sufficiently comprehensive to prove the importance of the earliest possible adoption of the proper means of recovery, and of that psychological knowledge which will detect the slightest deviation from a normal condition of mind.

By the report for 1855, of the Western Lunatic Asylum, Va., the proportion of recoveries since July 1, 1836, of all cases discharged of twelve months' duration and less, was 77.29 per cent. And the proportion of recoveries of all cases discharged for the same time, of more than twelve months' duration, was 30.60 per cent.

By the report for 1853 of the New York City Lunatic Asylum, at Blackwell's Island, it appears that of two hundred and seventy-one recoveries of that year, one hundred and fifty-three were of less than three months' standing; forty-seven were of from three to six months' standing; forty-two were of from six to twelve months' standing; twenty-four were of from one to three years' standing; and five were of from three to six years' standing. In other words, of two hundred and seventy-one recoveries two hundred, or 73.80 per cent., were cases not exceeding six months' duration.

The distinguished Dr. Brigham, in his second Report of the New York State Lunatic Asylum, remarks, "There are few serious diseases in which early treatment is more essential to recovery than insanity; and few in which it is more likely to be successful. A large majority of recent cases recover when subjected to early and judicious treatment."

In the Report for 1855, of the same institution, the following table occurs, "showing the duration of insanity previous to admission, and the period under treatment of the one hundred and twenty-eight discharged recovered."



|                                     | Duration before admission |         |        | Duration under treatment |         |        |
|-------------------------------------|---------------------------|---------|--------|--------------------------|---------|--------|
|                                     | Male.                     | Female. | Total. | Male.                    | Female. | Total. |
| Under three months - - -            | 58                        | 40      | 98     | 22                       | 8       | 30     |
| Under six months - - - -            | 4                         | 11      | 15     | 24                       | 16      | 40     |
| Under twelve months - - -           | 3                         | 4       | 7      | 17                       | 21      | 38     |
| Over one year and less than three   | 3                         | —       | 3      | 7                        | 12      | 19     |
| Over three years and less than five | 2                         | 1       | 3      | —                        | 1       | 1      |
| Over five years and less than ten   | —                         | 1       | 1      | —                        | —       | —      |
| Over ten years - - - -              | —                         | 1       | 1      | —                        | —       | —      |
|                                     | 70                        | 58      | 128    | 70                       | 58      | 128    |

It will be seen by the above table that one hundred and twenty, or 93.75 per cent. of those recovered were placed under treatment within a year after the invasion of the disease; and one hundred and eight, or 84.45 per cent. were restored in less than a year after admission.

The importance of early treatment being apparent, its bearing upon the question, *when* a person becomes deranged, and the importance of well-defined notions on the subject, is clear and inevitable. A want of proper knowledge on the point has given occasion for some very stupid errors, attended by fatal consequences. Not long since a person of refined accomplishments, wealth, and high social position, was admitted to one of our hospitals for the insane, in a state of hopeless derangement, accompanied by a letter from her attending physician, stating that he had for a long time delayed executing the necessary certificate for her detention in an asylum, "*Because he could not certify that she was wholly insane.*" As though the intellect must become a perfect wreck, with not one vestige of reason remaining, before a person can be said to be insane. Thus a mind of bright promise was ruined and doomed to life-long misery; and a wide circle of fond friends was cheated of a precious hope by the almost criminal ignorance of one to whom was committed the sacred trust. This is but an illustration—a single instance—of what is occurring every day, and almost every where.

*When is a Person Fit for Treatment?*—The first oscillation of reason is a mark of so much insanity. The first staggering under light truths, such as every child understands, is evidence of enfeebled intellectual powers. As soon as a man begins to think his legs are glass, though he may be a good judge of a leg of mutton, and may make as shrewd a bargain for a house or a farm as ever in his life, he is a proper object for medical treatment. The moment a man begins to believe he is a steam engine, though he may be as careful a stock-

broker as any in Wall street, and may be as exact in all the ordinary proprieties of life as ever, that moment he begins to be insane. When a man begins to fancy himself vastly richer than he really is; likes to drive at unaccustomed rates, and dash around in four-horse teams; becomes irregular in his habits; wakeful at night; loquacious; confident; inordinately extravagant, or generous, and thinks that this is all right; it is then time to call in his medical advisers.

Mental derangement is often so obscure in its commencement, and so insidious in its development, that the ordinary observer sees nothing wrong, and the most practiced expert may be for a time misled, or led into doubt. It may be, and sometimes is, so studiously and skillfully concealed as to be detected only by stratagem, or by long-continued observation and inquiry. Suicidal derangement is often of this character. Subjects of it sometimes practice the most consummate adroitness in concealing and executing their plans, and may be apparently sound in all respects, except the hidden purpose of self-destruction. They seldom, if ever, attempt it in presence of witnesses, or under circumstances which would lead to their detection before the act is completed. We have evidence of this in nearly every day's reports of suicides where no tendency that way have been suspected. There is a popular notion that if a person can lay and execute a good plan, superintend his affairs prudently, and uses his accustomed forecast, he cannot be deranged; but any one at all familiar with hospitals for the insane knows how frequent and well laid are their plans for escape, or for the gratification of pique or for pleasure.

Mr. Haslam relates the case of an Essex farmer who counterfeited recovery so well that he obtained his liberation, and having been sent back, attempted the same deception again. "He spoke of the treatment he had received from the persons under whose care he was then placed, as most kind and fatherly; he also expressed himself as particularly fortunate in being under my care, and bestowed many handsome compliments on my skill in treating his disorder, and expatiated on my sagacity in perceiving the slightest tinges of insanity. When I wished him to explain certain parts of his conduct, and particularly some extravagant opinions respecting certain persons and circumstances, he disclaimed all knowledge of such circumstances, and felt himself hurt that my mind should have been poisoned so much to his prejudice. But when I informed him of circumstances he supposed me

unacquainted with, and assured him that he was a proper subject for the asylum which he then inhabited, he suddenly poured forth a torrent of abuse; talked in the most incoherent manner; insisted on the truth of what he formerly denied; breathed vengeance against his family and friends, and became so outrageous that it was necessary to order him to be strictly confined. He continued in a state of incessant fury for more than fifteen months."

Those afflicted with hallucination sometimes for various reasons conceal their peculiar belief, and thus deceive for a long time those most intimate with them. The man who fancies he sees persons about his mansion, and hears them threaten his property or his life, may prefer to conceal his hallucination, although he may believe it a reality, rather than compromise his dignity by an open rupture with them, or his reputation by a confession of existing suspicions, or a knowledge of any of his fancied realities.

Illusions and nearly every species of monomania may, for similar reasons, be concealed for a long time, without the most careful scientific investigation, and until the physiological condition on which they depend shall have become confirmed and incurable.

Dr. Ray, in his eminent treatise on the "Medical Jurisprudence of Insanity," relates the following case:—"A woman once came under our care who was reported to have had several previous attacks, but beyond this the history of the case happened to be exceedingly imperfect. For three months her whole discourse and deportment were without fault or blemish. She was calm and quiet in her ways, affable and intelligent, and exerted a healthful influence upon those around her. In regard to her own case, she complained that she should be banished from society, and especially from that of a young and beloved daughter, who was then cast upon the mercy of strangers, and for no other reason, as she said, but the superior force of a tyrannical husband. She then would launch into a long and circumstantial account of the sufferings she had experienced by poverty, sickness, and every species of privation by his habitual intemperance. He finally crowned his iniquities two or three years before by shutting her up in a hospital for the insane, and finally added, as a great secret, not to be told at all, that he employed a man to go to the hospital every day to beat her soundly with a stick. Towards the end of the above period, she suddenly became agitated and



irritable, and finally raved. In this condition she continued about six months, when she began to improve quite rapidly, and in the course of a month or two she went home entirely restored, with her husband, whose conduct she then admitted had always been most exemplary."

*The Huntington Case.*—The recent case of Charles B. Huntington, convicted of forgery in December last, at the December Term of the Court of General Sessions, in this city, is one of those obscure cases which prove severe tests of the skill of even medical experts. It will be remembered that in this case moral insanity was the theory of defense. The public mind is so unused to the scientific signification of the term "moral insanity," that its popular acceptance is synonymous with moral depravity.

Not being regarded in its true character as diseased psychological manifestations, depending upon organic lesion of the brain, it is reluctantly admitted as a plea for crime, and we are not surprised that the press, through motives of well-known policy, should lend its influence in confirming this popular error, by parading at the head of its columns such captions as the following: "A New Kind of Insanity Discovered," etc. Thus, in opposition to medical testimony coming from sources entitled to high consideration, the court, not denying the truth and justice of the defense of moral insanity, nevertheless charges the jury to reject it as not recognized in law, and to find the prisoner guilty if, at the time of committing the forgery, he could discriminate between right and wrong.

*Moral Insanity.*—This is but one instance among many of frequent occurrence of the antagonism of the rules of law and those of science on this subject. All authentic scientific treatises on insanity admit this form; and, as the laws of science have hitherto helped to shape our civil laws, we ought to expect soon to see the obnoxious statutes remodeled. We hope, at least, for the sake of humanity, they may be.

But, however much the decisions of the courts may differ from the tests of science, we are ready to accept this particular case as a fair type of a large class coming under this generic denomination. The difficulty in recognizing these cases is clearly apparent. To do so successfully, the observer should have well-defined notions of this form of mental disease. Some of its characters are thus described in a work published in the beginning of the present century.

They are those most calculated to mislead an unskilled observer. "I refer to cases in which individuals perform most of the common duties of life with propriety, and some of them, indeed, with scrupulous exactness; who exhibit no strongly-marked features of either temperament; no traits of superior or defective mental development; but yet take violent antipathies; harbor unjust suspicions; indulge strong propensities; affect singularity in dress, gait, and phraseology; are proud, conceited, and ostentatious, easily excited, and with difficulty appeased; dead to sensibility, delicacy, and refinement; obstinately riveted to the most absurd opinions; prone to controversy, and yet incapable of reasoning; always the hero of his own tale; using the most hyperbolic, high-flown language to express the most simple ideas, accompanied by unnatural gesticulation, inordinate action, and frequently by the most alarming expressions of countenance. Persons of this description, to the casual observer, might appear actuated by a bad heart, but to the experienced physician, it is the head which is defective."

Although there may be diversity of opinion in regard to the condition of Huntington's mind, we think there can be no question that a proper course of moral and medical discipline—schooled in a lunatic asylum instead of in Wall street—would have been attended with highly salutary results.

*Hospitals for the Insane.*—The fact of the existence of insanity in any given case having been established, treatment cannot be commenced too promptly. But what shall that treatment be? It is needless to multiply words in proof that well-regulated hospitals for the insane are the only means of realizing the fullest known advantages of treatment. Having had some experience in the management of these institutions, I confidently assert that seldom, if ever, an insane person is detained in an asylum without being benefited by such detention. Such has been the result of my observation. I do not mean to be understood that they almost invariably become sane, or even less insane; but that such a result is far more probable, and that their general condition is almost sure to be better than that attending the best of private care.

But there are often certain difficulties attending the removal of an insane person to a hospital, and certain precautions are sometimes necessary to accomplish it discreetly and successfully. Most insane people object to the change

on the ground that it is unnecessary, because they regard themselves as sound, mentally, as their advisers; and it is certain that in some instances they seem to exhibit more adroitness, if not better sense.

As a rule having no exception, *all dealing with the insane should be honest and truthful.* Avoid all deception and duplicity; secure their confidence, and convince them of your friendliness, and they will yield to almost any reasonable request.

Whatever may be the condition of the patient's mind, whether quiet or furious, let the medical adviser be called; one on whom he is accustomed to rely, and let him candidly state the patient's condition in his hearing, and recommend a removal. Acting upon that advice, let the friends gently and dispassionately, yet firmly proceed to the task, and there will rarely be much reluctance on the part of the patient.

A large share of the difficulty in obtaining a patient's consent to removal comes from the indiscretion of friends, and the popular horror of asylums, growing out of ignorance of their true character. Let the friends acquiesce punctually and cheerfully, and the patient will generally be easily persuaded. If he is brought to the asylum, and confined there by a process of deception, supposing himself merely on an excursion for pleasure, as is sometimes the case, or destined to some public resort where he can indulge his wishes without restraint, until he finds himself secured behind bolts and grates, he at once loses confidence in those he before regarded as his friends; he feels wronged and irritated; looks with suspicion upon any one he meets, especially the officers of the institution, whose chief desire is to command his confidence, and assure belief in their good intention towards him. He thus begins hospital life under the most unfavorable impressions, and under circumstances calculated to essentially retard his recovery. His removal has become a positive injury to him, whereas, if properly conducted, it could have been attended with no harm.

It may sometimes be necessary to use coercive measures; better do this than deceive him. Coercion, when needful, should always be tempered with kindness. When arrived at the asylum, the medical officers then know their duty; and if an explanation has not been made, will insist upon a fair understanding between the patient and his friends before they leave him, in order to defend themselves against the



charge which patients so often make, that they are unjustly confined.

*Blood-letting.*—No well-informed physician needs to be cautioned against the reprehensible practice of blood-letting, as recommended by Dr. Rush. Although he justly has ranked high as authority on this subject, great improvement has been made in the therapeutics of insanity since his day. When a physician is called to an insane person, especially if he be laboring under much delirium, or general mania, it is a too common practice to resort to depletion, and especially to the disastrous form of blood-letting. If a patient is wakeful and boisterous—in a continual excitement—he will very soon need all the vital force nature can supply, to keep him in existence.

Dr. Luther V. Bell, in his report of the McLean Asylum for 1841, remarks: “Each year that I have passed in this extensive field has served to diminish my confidence in active medical treatment of almost every form of disease of the mind, and to increase my reliance upon moral means. No individual at the head of an insane institution would now think of combating any form of insanity with the depleting and reducing means once regarded as indispensable. The practice of bleeding, violent purgatives, emetics, vesicatives, and derivatives has passed away before the light of experience. The treatment best suited to inmates of a hospital is also best suited to them before their admission.”

Dr. Samuel B. Woodard, in the Twelfth Annual Report of the Lunatic Hospital at Worcester, Massachusetts, remarks: “All agree that depletion, by which I would be understood general bleeding and active cathartics, is not favorable in insanity, as it rarely affords more than temporary relief, and, frequently used, produces injurious effects.”

Dr. A. Brigham, in the Fifth Annual Report of the New York State Lunatic Asylum, remarks: “The treatment of insanity by bleeding, though strongly recommended by Dr. Rush and some others, we believe to be generally improper and frequently very injurious; sometimes it appears to produce a fatal result, and we are confident that it not unfrequently renders cases incurable. Some physicians appear to consider great maniacal excitement, vociferation, and violence, as sufficient evidence of inflammation to have recourse to general bleeding; but, as we have said, this is usually a sad mistake. No regard, whatever, should be paid to the mere excitement and violence of the patient as furnishing indication for bleeding.”

Dr. Pliny Earle, at the conclusion of an elaborate collation of evidence on both sides of this question of blood-letting in mental disorder, makes the following as the first among other deductions: "1. Insanity in any of its forms is not of itself an indication for bleeding. 2. On the contrary, its existence is of itself a contra-indication. Hence, the person who is insane should, other things being equal, be bled less than one who is not insane."—*American Journal of Insanity*. Vol. 10, p. 402.

I will add, that I have often remarked disastrous results occurring where large quantities of blood had been abstracted by the general practitioner before admission to an asylum. Such cases almost invariably result fatally, either in death, dementia, or some chronic form of mental disorder; at best, their recovery is protracted, tedious, and always doubtful. This theory will hold true in regard to vesicatives, drastic cathartics, and depletory agents in general.

299 WEST 35TH STREET, NEW YORK.

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ART. VI.—*A Case of Hydrophobia, following the Bite of a Dog—Death—Autopsy*. By JAMES B. REYNOLDS, M.D., House Physician to Bellevue Hospital.

James Hutchinson, æt. 16; admitted into Bellevue Hospital, December 13, 1856. (Service of DR. ELLIOT.) The patient was a healthy, robust lad, of nervous temperament. During the latter part of August, 1856, while attempting to catch a dog, he was bitten in the left hand, between the index finger and thumb. The dog was not considered rabid, but was immediately killed by the patient, and the wound, in the course of half an hour, was burned out by nitrate of silver. A man was bitten on the same day, by the same dog, but up to the present time is healthy. The cicatrix has since been the seat of an uneasy sensation; but, with this exception, all went on well until Wednesday, December 10, when his parents noticed that he was dull, and had an undefined fear, not being willing to go out at night, or to be left alone in a room by himself. The morning of Friday, the 12th, he did not eat his breakfast with his accustomed relish, complaining of a general feeling of malaise; he partook of but little dinner. Up to this time, he had complained of no difficulty about the throat; but during the afternoon he began to have some pain over epigastric or

lower sternal region, which gradually rose up to the throat, assuming there a choking character. A dose of senna and salts was, during the evening, given to him, which he, by several attempts, managed to swallow; it operated freely; he did not sleep at all during the night, for fear of suffocating. Saturday morning, the 13th, a doctor was called in, and pronounced it a case of hydrophobia, and advised removal to Bellevue Hospital. When brought in at a quarter after three p.m., he was very much excited, having considerable difficulty in breathing, the spasms of choking being very frequent and severe; at first, he assumed an upright position upon his knees, with his head thrown back, face and lips, during a paroxysm, becoming of a dusky hue, hardly livid, eyes projecting with a wild-frightened stare and slight external strabismus; considerable jactitation or restlessness; extremities cool and moist, with feeble circulation; respiration was very irregular—a long deep sigh, followed by a succession of short, catchy inspirations—nearly sobbing, together averaging thirty-six per minute; pulse, 96, of natural fullness, but very irregular, varying sometimes fifteen beats in a quarter of a minute; he soon became comparatively quiet, when he was able to lie down, with head and shoulders raised. Pulse fell to 86, and paroxysm much less frequent. When first admitted, water was given him to drink, when he became convulsed, but by clutching it with both hands, and making several trials, he at last got it to his mouth, but not more than a tea-spoonful could have been swallowed; the remainder was forcibly ejected. Another attempt was again made after a few minutes, but he was unable to get it to his mouth; his eyes being most of the time turned from it. Upon the entrance of a number of students, he became very much excited, which excitement was much increased, or rather aggravated into a paroxysm, by a draught of air from a window suddenly raised. The convulsion was again brought on by using a fan near him; water was handed to him, and after some persuasion, he forcibly grasped the glass, and gradually bringing it to his mouth, gulped down an ounce or two. A small and imperfect looking-glass was then brought near and opposite to him, but with little effect at first, though at last it excited a convulsion. After the withdrawal of the class of students, he became comparatively quiet, but the spasms were gradually, but perceptibly, increasing in frequency and force.

At five p.m., he was seen by Dr. Elliot, the attending



physician. Twenty-four dry cups had just been applied to spine, laudanum 3ij, but with the addition (through a mistake of the nurse,) of gr. vj of the aqueous extract of opium, and powder of assafoetida 3ss, was given per rectum; he drank some water and also some wine.

Seven P.M.—Another enema of extract of opium and assafoetida, but with only .3i of laudanum, was again given; he now became drowsy, sleeping at intervals, but waking with a convulsion, and much frightened.

Eight P.M.—Becoming slightly delirious, wishing to rise and dress, as he thought it time to go to school; but upon all other subjects, as far as could be ascertained, he was perfectly rational; his mind was morbidly acute; when asked to do any thing, he would immediately control his restlessness or jactitation, and instantly obey, appearing to be very anxious to comprehend and do what was bidden. About this time, he began to have slight spasmodic actions of diaphragm, accompanying or causing the rejection of whatever the stomach contained; the vomiting or rather difficult retching gradually grew worse, until, at last, it became one of the most marked and distressing symptoms.

Nine P.M.—The patient was now seen by Drs. Metcalfe, Wood, Stephen-Smith, and other medical gentleman. He became much excited by the presence of so many strangers. After becoming calm, Dr. Metcalfe asked him whether he suffered from pain any where; he answered that there was pain in his breast, placing his hand over the sternal region. Water was then poured into a bowl upon the floor, without his knowledge; but the sound caused a convulsion. A speck was then pretended to be seen upon his forehead, which was gently blown upon, producing much excitement, and the continuing it brought on spasms; even the breath of the attendant would excite him. Warm milk-punch was then handed to him; as he would allow no one to hold the cup, he clutched it with both hands, and gradually, but spasmodically nearing his mouth, he gulped down the whole (about four ounces). Chloroform was then cautiously administered to him; even the vapor excited convulsions; it acted badly, causing lividity of the face, and close contraction of the pupils, which before were dilated; and nearly suspending respiration. He came out of the effects of the anæsthetic with a convulsion. When going under the effects of chloroform, he made some movements which seemed very much like attempts to bite. It was proposed by Dr. Wood to perform tracheoto-

my, and introduce a tube through which the patient might breathe, instead of through the irritated larynx; but one of the medical gentlemen rather opposed the operation, on the ground that patients with hydrophobia do not die with symptoms of asphyxia. During the evening he said, to use his own words, that "the doctors wished to make him out mad; but he knew he was not, because he had killed the dog, and his father had paid the doctor fifty cents for burning out the bite. He had the "nerves." Another injection of laudanum was given, and also brandy by the mouth; he had already taken about eight ounces of wine, and three pints of milk.

Ten P.M.—Convulsions and vomiting increasing, and opisthotonos more marked. From the horizontal posture, he would suddenly spring upon his feet or knees, and stare wildly at some visionary object, and attempt to get out of its way; all the time spitting a tenacious, ropy mucus; head thrown back. About this time, he imagined that he had a pig in his mouth, which he at last, with difficulty, expectorated by the advice of the nurse; he also complained of a sensation of hairs in his mouth.

Eleven P.M.—He now became quite delirious, calling upon his parents and friends, and at times complained of headache; pulse too frequent to count, and very irregular. Injections continued.

Half-past twelve A.M.—He was now seen by Dr. Elliot. His tongue was cracked transversely, but not dry; the saliva, being very tenacious, and streaked with blood, was with great difficulty expectorated. The convulsions gradually increasing in frequency and force, were now very violent, requiring two attendants to hold him; for as soon as the paroxysms were over, he would immediately sink upon the bed exhausted. He died very suddenly at quarter-past one A.M. on Sunday, December 14; living from thirty-three to thirty-six hours after the disease showed itself plainly, and ten hours after entering the hospital. His death was from exhaustion. The thoracic walls were immediately compressed; the air within being pressed out, and over the vocal cords, gave rise to a sound of very high pitch; so natural and shrill a shriek was it, as to startle all present, showing the vocal cords to be in a state of tension. Artificial respiration being continued, the same sounds resulted, but less markedly.

*Post-mortem examination* thirteen hours after death (dictated by Dr. Metcalfe) —Rigor mortis well marked; body well developed; foam escaping from mouth; marks of the dog

bite on the left hand, at the root of thumb; tendency to ecchymosis on dependent parts; scalp congested; best marked on posterior part of left parietal bone. On making an incision along the back, about  $\frac{3}{4}$  of black fluid blood escaped; also, blood between bones and membranes of cord; the spinal cord, on being removed, presented no morbid appearances; on opening the theca, there was considerable congestion of the vascular membrane, the blood being fluid. On removing the calvarium, the vessels of the dura mater were very much engorged; on removing this membrane, the pia-mater was found congested; puncta vasculosa abundant; contrast great between cortical and medullary substance; cortical darker than usual. The heart was contracted, showing what formerly would be called a marked case of *concentric hypertrophy*.

It is to be much regretted that a tube was not placed in his trachea as soon as he entered the hospital. Although patients, as a general rule, do not die by suffocation, yet it is conceded that the throat is the principal source of irritation, and from it arise many of the most aggravated symptoms; and the involvement of other parts of the system seems to be secondary, or at least to be aggravated by the spasms of the throat. Now, by the insertion of a tube into the trachea, one source of irritation, the continual passage of air over the irritated parts is removed, and they are allowed to *rest*; one of the most efficient of nature's means for the restoration of a part to its normal state.

If I was so unfortunate as to be attacked by this awful disease, I would insist upon the introduction of a tube into the trachea as soon as the disease was recognized, and that all remedies should be given per rectum.

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ART. VII.—*Reports of the Practice of the New York and Bellevue Hospitals.*

NEW YORK HOSPITAL.

REPORT of cases treated in the Medical Department of the New York Hospital, during the months of July, September, and October, 1856. By H. D. BULKLEY, M.D., one of the Attending Physicians.

The whole number of cases treated in the medical wards of the New York Hospital during the month of July, 1856, was two hundred; and during the months of September and October, three hundred and thirty, making the total number during the three months, five hundred and fifty. The number of deaths during July was twenty-two, and during September and October twenty-nine, making the whole number



forty-nine during the three months; equal to a little less than nine per cent. Among the deaths in July, were three by collapse in remittent fever; four by yellow fever; two by disease of the brain; two by tubercular diarrhœa; two by exhaustion from heat; and one by hæmoptisis; most, if not all, of which afforded little or no chance for treatment. All but one of the patients with yellow fever had black vomit at time of admission, or very soon afterwards. The patient with hæmoptisis was a seaman, and died in a few minutes from asphyxia, caused by a most fearful hæmorrhage, the attack coming on during the visit, and while he was dressed and sitting in his ward. Of the twenty-nine deaths during September and October, eight were caused by phthisis; two by yellow fever; two by disease of the heart; one by aneurism of the aorta of an enormous size; and two by disease of the brain; and if these, with the cases in July which afforded little, if any, chance for treatment, are deducted from the total number of deaths during the three months, the per centage will be reduced to four per cent. Still further allowance must be made for the number of cases brought to the hospital in an exhausted state, and in the last stage of disease, when little or no hope of life remains. Among cases of this nature during the period embraced in this Report, were three cases of diarrhœa; four cases of delirium tremens, three of which were complicated with convulsions; and one with gastro-enteritis, in a man with a broken down constitution, etc.

The number of cases of dysentery during a season of the year where they have, heretofore, been numerous, was remarkably small. Of the few cases admitted, or which originated in the hospital, but one or two were severe, and none were fatal. Malarial disease, as usual, furnished an abundant supply of patients and in great variety, embracing many cases of much interest, the whole number reaching eighty-five, of which twenty-one were in July, and the remainder in September and October.

*Typhoid Fever.*—During the short interval from the 14th to the 31st of October, inclusive, eight well-marked cases of the abdominal variety of typhus fever, considered by some as a distinct species, under the name of "typhoid" fever, were admitted into the hospital; none of this variety having been noted until the first of these periods. Of these, six were in males and two in females, and they were of ages varying from fifteen to twenty-three years. They came from different parts of the country—some from New England; some from the South; and some from the city. Diarrhœa was an early and prominent symptom in seven cases; epistaxis was an early symptom in four; rose-colored spots occurred in all but one, and in this case there was an abundance of sudamina; and in one case there were both rose-colored spots and sudamina. In one only, a stage driver from the city, who had been sick three weeks when admitted, there were rose-colored spots without either diarrhœa or epistaxis. In no case did the pulse exceed 100; and in most of the cases it ranged from 80 to 90, and in two or three cases was dicrotic. The two patients with it (brothers) who entered on the 14th, were in full convalescence, and two others, who entered on the 23rd and 25th, were doing well on the 31st, when my term of service ended, and all were then in a promising condition.

The treatment was very simple, mostly expectant. Opium was given to check the diarrhœa when urgent, and beef tea, and in some cases, wine whey, when the pulse seemed to indicate its use; but stimulants were either not required at all, or to a limited extent, and for a short period. Ice was given freely in the early stage.

There were under treatment during the months of September and October, fifteen patients with paralysis, embracing cases differing in their form and in their cause, some of them interesting in their nature, and which we hope to be able to make the subjects of future record and remark. Our present limits, however, will only allow us to make selections from the many cases of disease of interest which presented themselves during the three months embraced in our report, to which we must confine ourselves.

*Ovarian Disease.*—Three cases of ovarian disease were admitted into the hospital during these three months. One of these was in a widow, 58 years of age, whose abdomen was very much distended with fluid, and in whom the physical signs and the history of the case rendered the diagnosis easy; and the second, in an unmarried female, 21 years of age, in whose abdomen a tumor could be distinctly felt, but respecting the exact nature of which there was some difference of opinion. The third case, and the only one subjected to treatment, and hence worthy of any special notice, and which in its progress and result was not without interest, was in a healthy looking Irish woman, 35 years of age, with sandy hair and complexion, who came from Dunkirk, in this State, for advice, and entered the hospital July 25. She had been the mother of five children, the youngest of which was 18 months old, which had but recently been weaned. Her general health had been good, and she had suffered from nothing, except slight attacks of malarious disease at times, which had left no sequelæ, as far as could be ascertained. Her menses had been regular since the weaning of her last child. Soon after the birth of this child she experienced some difficulty in making water, but suffered no pain at that time, and perceived no swelling of her abdomen. About two months after her confinement, however (sixteen months before entering the hospital), she had pain in both iliac regions, which lasted three weeks and then left her, but afterwards returned, when she first began to notice slight enlargement of the abdomen. This enlargement gradually increased until it became inconvenient from its size, when she was led to seek for relief.

On examination, the abdomen was found largely distended with fluid, fluctuation very distinct, with entire dullness over the whole of the umbilical, epigastric, and iliac regions, with very slight sonoriety over the hypochondriac regions. The abdominal tumor was perfectly smooth, tense, and elastic, and no distinct tumor or tumors could be felt. On examination per vaginam, the uterus was found in its normal situation, its anterior lip slightly enlarged, and the os tincæ somewhat patulous; otherwise healthy. The general health was good; appetite fair; bowels regular; sleep natural; the urine was scanty in quantity, turbid, and of a rather dark color, and free from albumen. She suffered from nothing but the great enlargement of her abdomen.

As some doubt at first existed as to the exact nature of the case, she was put under the use of diuretics, several kinds of which were used, and afterwards of mercurial alteratives, which very decidedly increased the quantity of urine at times, but without any diminution of the swelling of the abdomen. Feeling now fully confirmed in the opinion early formed, that it was a case of unilocular ovarian disease, and that, consequently, internal remedies would be of no avail, it was decided, with the approbation of my colleagues, to relieve her of the fluid, for the double purpose of affording her at least temporary relief, and of being better able to judge whether the resources of surgery could afford any hope of ulterior aid. Accordingly, on the 9th of October, I drew off three hundred and seventy-five ounces (nearly three gallons) of aropy fluid, of about the consistence of thin molasses, of a dark greenish color, which coagulated so firmly, both by heat and nitric acid, as to form almost a solid mass. The operation was performed in the usual way, by puncturing the walls of the abdomen in the median line between the umbilicus and pubis, and care taken to prevent any escape of the fluid into its cavity. After the withdrawal of the fluid the walls of the cyst could be distinctly felt in a collapsed state within the abdomen, and but a single cyst could be detected. Patient was somewhat exhausted after the operation.

Besides several physicians and students who were present throughout the whole, Dr. John L. Atlee, of Lancaster, Pen., accompanied by my colleague, Dr. Joseph M. Smith, came in toward the close. Dr. Atlee, whose name is well known in connection with this class of affections, examined the patient, approved of the operation, and stated that the case was a favorable one for the removal of the cyst by the knife, after the lapse of the proper period of time.

October 11 (Second day after the operation).—Complained of some pain in left side of abdomen, which was, however, not severe, and which she described as superficial. No pain on pressure over abdomen; bowels opened freely yesterday morning; has had some vomiting; pulse 100. She was now put under the use of opium, in pills of one grain each, to be taken at intervals of from one to three or four hours, according to the urgency of the symptoms.

On the following day (October 12) there was some pain on pressure over the abdomen, but the skin was soft, and at times bathed with profuse perspiration, and her pulse was 92, and soft.

The next day, the bowels not having been moved since the 10th, the opium was suspended, and an enema given.

October 14.—No effect from enema. Ordered—calomel grs. x., to be followed by castor oil.

October 15.—No effect upon bowels, but is free from pain. Pulse 92, and quick; skin soft and moist.

On the 16th there was a small passage from the bowels, and she felt better, and the pulse was slower.

October 19.—Had an enema last night, which produced a copious discharge from the bowels, and was followed by a feeling of relief. Suffers from nausea and vomiting occasionally, throwing up several times in the day moderate quantities of a greenish-colored fluid.



October 21.—Bowels moved without aid. She was free from pain. Pulse 84, and soft; appetite poor; nausea and vomiting at times. About this time her tongue began to become red and dry, and the stomach retained but little food. Opium and morphine were occasionally given, also stimulants and mild vegetable bitters, as infusion of *prunus virginiana*, etc., but the skin was very much relaxed; and she complained of great exhaustion. There was constant and urgent thirst, to allay which ice was freely used. The abdomen began to increase in size again about this time, although the exact period at which this increase commenced was not noted, but there was not the least pain on pressure over it, and the swelling was evidently tympanitic in its character, and was distinctly circumscribed. From the absence of pain upon pressure, the persistent and circumscribed tympanitis, and the soluble state of the bowels, it was thought that the symptoms were owing to inflammation of the peritoneum covering the ovarian sac, of which the gastric symptoms were supposed to be symptomatic. Her general symptoms continued with little or no change; but the enlargement of the abdomen gradually increased, and some fluctuation could be detected at the lower part of it, while by far the largest portion was sonorous on percussion, and evidently filled with air. She was quite feeble, and gradually losing strength.

November 1.—She now passed under the care of Dr. J. M. Smith, but continued to sink, and died on the 13th of November.

*Autopsy*, twelve hours after death.—The ovarian cyst was found to be very large, and to be single, and was connected with the right ovary; it was slightly adherent upon its anterior surface, and not at all adherent posteriorly; the adhesions were recent, and easily broken down; it was tympanitic anteriorly, and there was no gas in the abdomen. Upon opening the sac, a considerable quantity of gas escaped; a quantity of yellowish, purulent matter was drawn off, about equal to that removed by the operation; the inside of the sac was lined with a thick layer of false membrane, of recent origin, which could be easily peeled off.

The abdominal cavity was entirely free from any evidences of peritoneal inflammation; *lumbricoides* were found in the intestines, but there was but slight evidence of inflammation of the mucous membrane of the stomach or bowels; the liver was healthy.

The fact that there was but a single cyst, and that this was almost entirely free from adhesions, would seem to confirm the opinion expressed by Dr. Atlee at the time of the withdrawal of the fluid, that it would have been a favorable case for its removal by the knife, if there had been any interval in which the patient was in a proper condition for the operation before the lining membrane of the sac took on a pyogenic character.

In connection with the diagnosis of the character of dropsical enlargement of the abdomen, derived from complete dullness over the umbilical region, with partial clearness over the iliac regions, which is laid down by writers, and generally recognized as the leading physical sign which distinguishes ovarian enlargement from a collection of water in the abdominal cavity, I would remark, that this sign failed in

a case of ascites, in a woman thirty years of age, who entered the hospital in October. In this case, the usual sonoriety on the umbilical region was wanting, the percussion being dull over that part, and slightly clear over the iliac regions. All doubt of the nature of this case was removed by the tapping which was performed, and by the subsequent progress of the case.

*Diabetes.*—Two cases of diabetes were under treatment—one of diabetes insipidus, and one of diabetes mellitus—the former worthy of record from its rare occurrence in an adult, and the second from the trial of a new remedial agent. The case of diabetes insipidus occurred in a female, æt. 21 years; a factory girl; of rather slender frame; of a strumous diathesis; with dark brown hair, and a florid complexion, who was admitted into the hospital May 19, 1856. She stated that she had been healthy up to the time of her attack, and knew of no cause for it. The room in which she worked was kept very warm, and she was accustomed to expose herself to all kinds of inclement weather, without being warmly clad, or keeping her feet dry. About a year before her entrance into the hospital, she was compelled by circumstances to retain her urine for some time, with distention of her bladder, and a strong desire to relieve herself. She suffered severe pain in the back at the time, which was relieved by the discharge of a considerable quantity of urine, and has not been troubled with it since. After this, she noticed that she had to urinate frequently, and that the quantity passed was large, although but little was passed at a time. Pain was felt on urinating, which continued afterwards, but not so severe. A slight degree of this pain is now constantly felt, and is increased when urinating or moving about. It is confined to the urethra, and its neighborhood in the vagina, and is sharp and cutting in its character. The quantity of urine passed, according to her estimate, would amount to about one hundred and twenty ounces in twenty-four hours at various times, the average being about one hundred ounces.

She was quite fleshy before the attack, but has since lost both flesh and strength; appetite has been good, but never immoderate; thirst has been excessive; she has suffered from no dyspeptic symptoms; she has paid no particular attention to diet, but has frequently restricted herself in the use of liquids, but without any effect upon the amount of urinary discharge; her bowels have been somewhat constipated, having usually had a passage every two or three days; her menses are regular as to time, but scanty in quantity.

No member of her family is known to have suffered from a similar affection. Her father is healthy; her mother died of phthisis; and she has lost one sister from acute hydrocephalus. She has never had a cough; her general health is now fair, and she complains of nothing but debility, and the discharge of an immoderate quantity of urine, which is passed frequently, and which compels her to rise often at night. The urine is of a light straw color, without any particular odor; no sugar can be detected in it, either by Trommer's test, or by that of yeast, or of liquor potassæ; the specific gravity is 1003; the skin is cool but not dry, and she complains of cold hands and feet.

The treatment was commenced May 23, when she was passing one hundred and thirty ounces of urine in twenty-four hours, of the specific gravity of 1008, when she was ordered tinct. mur. ferri, five drops three times a day. The quantity of urine varied during the remainder of the month from one hundred and thirty to one hundred and forty-six ounces in twenty-four hours, falling on one day down to one hundred and twelve ounces.

On 1st of June, the use of cod-liver oil was commenced, in doses of a table-spoonful three times a day, after which she began gradually to improve in both flesh and strength, and had also less pain in urinating. The quantity of urine during the month of June ranged from one hundred and eleven ounces (the smallest quantity passed) to one hundred and forty-five ounces in twenty-four hours, which it reached but once, but frequently reaching one hundred and thirty ounces, and several times one hundred and thirty-five ounces. When she came under my care, on the 1st of July, the quantity noted was one hundred and ten ounces, which was also the same on the following day, when the specific gravity was 1007.

On the 10th of July, when the quantity was one hundred and eighteen ounces, she was directed to take five drops of spirits of turpentine three times a day. The quantity of urine noted on the 11th was one hundred and thirty ounces, on the 12th one hundred and twenty ounces, when she was directed to increase the quantity of spirits of turpentine to ten drops, four times a day. From this time there was a diminution in the quantity passed, which, during the remainder of the month, ranged from one hundred to one hundred and ten ounces, on one day falling to ninety-four ounces, and another day to ninety-five. The cod-liver oil was continued regularly during this time, and both the health and spirits of the patient were decidedly improved, and on the 6th of August, she left the hospital, much relieved.

The case of diabetes mellitus was in a man, æt. 29 years; a carpenter by trade; native of Massachusetts; who entered the hospital June 11, 1856. He traced his disease four years back to an attack of typhoid pneumonia, the only symptom which he observed at that time being an increase in the quantity of urine passed, which he estimated to be at least two gallons in twenty-four hours. Soon after this he became costive; had an inordinate appetite and thirst. Six months afterwards, he put himself under the care of a homœopathic physician, and was treated two months by him without benefit. He then consulted a regular practitioner, and was put upon the use of creasote, tincture of iron, and a meat diet, with considerable improvement.

When he entered the hospital, he was reduced in flesh and strength; pulse was feeble; tongue coated; appetite good; thirst considerable; skin cool, but not dry; he had diminished vision of the left eye; he was passing one hundred and four ounces of urine in twenty-four hours, of specific gravity 1040, containing an abundance of sugar, and presenting the characteristic appearance of diabetic urine. He was



first directed to take Dover's powder three times a day, and to confine himself to animal food.

On the 23rd of June, he was put on the use of phosphate of iron, the quantity of urine having fallen in one day since his admission to sixty ounces, and another day to sixty-four ounces, being ninety-six the last twenty-four hours.

July 3.—The quantity passed on the 1st inst, was seventy-two ounces, of specific gravity 1042; and yesterday and to-day, fifty-six ounces each. He was now directed to take benzoic acid, in doses of five grains, three times a day, according to following R. acid. benzoic. grain XL. syr. tolu  $\zeta$ i m. two tea-spoonfuls.

July 15.—The quantity of urine on the 4th rose from fifty-six to seventy-four ounces, and on the 6th reached one hundred and sixteen ounces, and ranged from seventy-two to ninety-six ounces, until the 14th, when one hundred and twenty-eight were noted—the specific grain being 1035 on the 10th, when eighty-six ounces was passed; and 1040 on the 12th, when ninety-eight were passed. To-day a copious diarrhœa has come on, and no sugar was discerned in the urine by Trommer's test, while it was found by the yeast test.

July 19.—Diarrhœa still continues; quantity of urine, sixty-four ounces. The benzoic acid was still continued; directed to take Dover's powder.

July 20.—The diarrhœa persisting, the benzoic acid was discontinued, and he was directed to take one grain of opium every two hours.

July 23.—Diarrhœa checked. Passed eighteen ounces of urine yesterday, and has passed only sixteen ounces the last twenty-four hours, of specific gravity 1020; and *no sugar was detected in it* by either Trommer's test or yeast.

July 24.—Has passed twenty ounces to-day; has had no passage from bowels since day before yesterday. Directed to discontinue the opium, and to resume the benzoic acid as before.

July 28.—Although he has had eight or ten discharges from his bowels to-day, he has passed one hundred and twenty ounces of water, of specific gravity of 1027, containing an abundant quantity of sugar.

July 29.—Diarrhœa stopped spontaneously. Passed one hundred ounces.

August 4.—Passed one hundred and thirty-two ounces on 1st inst.; one hundred and twenty-four on second, and one hundred and twenty-eight on third; and to-day has passed one hundred and forty-eight, specific gravity 1032; has no diarrhœa; perspires somewhat, but has considerable thirst; says that he feels more comfortable than he did.

August 5.—Condition about same; bowels in good order; passes one hundred and eighty ounces of urine in twenty-four hours; still takes the benzoic acid regularly.

August 8.—Has some diarrhœa to-day; quantity of urine seventy-two ounces; directed to take pulv. Dover.

August 9.—Diarrhœa checked. Passes ninety-six ounces.

August 13.—Quantity of urine rose to one hundred and twenty-

four ounces on 10th; some diarrhœa to-day; passed eighty-four ounces yesterday, and the same quantity to-day.

August 20.—Has passed from ninety-six to one hundred and thirty-eight ounces since last date; bowels now regular; passed one hundred and fourteen ounces the last twenty-four hours. Benzoic acid still continued.

September 1.—Since last date, quantity of urine has fallen as low as forty-eight ounces in twenty-four hours in one instance, another day to sixty-four ounces, and rose as high as one hundred and four ounces yesterday; quantity last twenty-four hours was one hundred and twelve ounces. Ordered—tinct. mur. ferri, ten drops, three times a day.

September 6.—Abundance of sugar in urine; passes one hundred and forty-six ounces. Ordered—pil. opii.

September 16.—Bowels have been somewhat loose, and he has been kept under the use of opium; had but one passage yesterday; pulse 96, of good strength; quantity of urine has varied since last date from eighty-six, as the lowest quantity, to one hundred and fifty-two ounces as the highest; now passes ninety-six ounces, specific gravity 1037; he was now directed to take ten grains of benzoic acid, three times a day, and also to continue the opium.

September 19.—Directed to take cod-liver oil, a table-spoonful three times a day.

October 1.—Remains without change. Quantity of urine has varied between the two extremes of ninety and one hundred and eighty ounces, having reached the latter amount yesterday. Quantity passed last twenty-four hours, one hundred and fourteen ounces.

October 22.—Has continued without particular change; the urine in one instance having fallen as low as one hundred and eight ounces, and twice reached one hundred and seventy-six ounces; had a diarrhœa last night, with watery stools, preceded by pain; and the quantity of urine was reduced to forty-eight ounces, specific gravity 1039; the appetite is now good, and the thirst more moderate than at first.

October 31.—Has been taking ten grains of benzoic acid three times a day, since it was last ordered, and a table-spoonful of cod-liver oil, three times daily, since September 10th. The quantity of urine passed on the 23rd, was eighty-four ounces, on the 24th, eighty ounces; 25th, ninety ounces; 26th, ninety-six; and on 27th, eighty ounces; although there had been no stool since the 25th; on the 28th, it rose to one hundred and twenty ounces; and on the 29th, to one hundred and forty ounces; and to-day is one hundred and fourteen ounces.

The diet during the month of July was farina boiled with milk, and crackers; and during the months of September and October, mutton-chops for dinner, with bread and crackers, and milk twice a day. The thirst varied on different days, sometimes owing to a diarrhœa, and sometimes without any appreciable cause. The quantity of fluids varied with the thirst usually, although for some time he abstained from gratifying it, but thought that he passed more water when he did so than when he indulged his desire to drink. No record of the amount

of fluid taken from day to day was kept, but he estimates the average quantity to have been about four quarts during the four months, from July to October inclusive.

It will be noticed as a striking feature in the case, that on the 23rd of July, after having taken benzoic acid for seventeen days, and on the third day after its use was temporarily discontinued, and while he was taking a grain of opium every two hours to check a diarrhoea which had supervened several days previous, which diarrhoea had on that day been checked, he only passed sixteen ounces of urine during the twenty-four hours, of the specific gravity of 1020; and that *no sugar could be detected* in it by either Trommer's test or yeast, although the experiment was carefully repeated by the same gentleman who had been in the habit of testing it, and had always found sugar on former trials. On the preceding day, the quantity passed only reached eighteen ounces. It will be remembered that on the day of his admission, he had passed one hundred and four ounces in twenty-four hours, of the specific gravity of 1040; on the 10th of July, sugar was found by the yeast test, but not by that of Trommer.\*

The use of benzoic acid in this case was suggested by its effects in a case reported by Dr. Rand, in the *Quarterly Summary of the Transactions of the College of Physicians of Philadelphia*, vol. 2, number 8, from March 7, to April 4, 1855, in which the disappearance of sugar in the urine, soon after its administration, on five different occasions, would seem, as the author remarks, to establish a relation of cause and effect. The benzoic acid in that case was given in pill, in doses of ten grains, three times a day. The patient had remained a year without any traces of the disease. In that case, however, the disease was brought about by the indulgence of the appetite for fruit and farinaceous diet, while the patient could eat candy without any such result. A peculiarity in Dr. Rand's case was that the sugar disappeared almost immediately after commencing the use of the acid, sometimes the next day. Dr. W. M. Uhler, who suggested the use of the remedy, assumes "that the cure is effected by the benzoic acid converting glucose into lactic acid, which is broken up and respired instead of passing off through the kidneys." This explanation assumes, as Dr. Rand remarks, the grape sugar to be the cause of the disease, and not the effect, and agrees with that view of the pathology of the disease which makes the fault in the lungs, which do not consume the

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\* This patient is still in the Hospital (February 23); and according to the record kept, the quantity of urine ranged nearly as high as two hundred ounces daily, during the month of January, exceeding that amount on nine days, and reaching on one day as high as two hundred and seventy ounces in twenty-four hours. Thus far in February, it has ranged from one hundred and sixty to three hundred and forty ounces, having reached the latter figure the last twenty-four hours. He has emaciated since October, and also lost strength. He has been living on meat and potatoes, and soup, and bread and tea, during a few weeks past. He now suffers considerably from thirst, and drinks about six quarts daily. He was without any special treatment during the month of January; and since then, has been under the use of yeast. He still continues to take the cod-liver oil.



sugar found in the liver. Our limits will not allow us more space for remarks on this interesting but obscure subject, but we will close our report with a single brief case.

*Tenia Expulsion by Pumpkin Seeds.*—A German sailor, twenty-two years of age, who had discharged a part of a tape-worm a year previous, and who had been continually passing portions of it since that time, was admitted into the hospital, July 15. He experienced no inconvenience, except when he took certain articles, as vinegar, salt, etc., when he had a severe pain in the epigastric region. He had had a craving appetite at times, but had never suffered from itching about the anus or the nose, and had not lost flesh. His bowels were regular, tongue clean, etc., and he appeared like one in good health. He was first ordered a dose of castor oil, which brought away several small joints of the worm. On the 22nd of July, after having been kept from food nearly twenty-four hours, he took the following emulsion at one draught:—℞ Pulv. pep. cucumb. ʒij., sach. alb. ʒj., aqu. bul. oss. ℥—and two hours afterwards, ol. ricini. ʒi.

On the afternoon of the same day, he passed six feet of tape-worm, which lived about three hours. The same emulsion was repeated a few days afterwards, but without bringing away any more of the worm; and two days afterwards he left the hospital. We have to regret that, owing to the accidental loss of the worm, we were disappointed in an intended microscopical examination, for the purpose of learning whether the head was discharged.

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#### BELLEVUE HOSPITAL.

##### *Cases of Perforation of the Pulmonary Pleura, with Remarks.*

By D. D. SAUNDERS, M.D., and JOHN C. DRAPER, M.D., of Bellevue Hospital, New York.

*Case 1.—Phthisis, followed by Hydro-Pneumothorax—Injection of Chlorine Water into the Pleural Cavity.*—Catharine Hays, single; æt. 29; native of Ireland; a domestic by occupation. Admitted to Bellevue Hospital, November 24, 1856; intemperate in her habits; has had syphilis; her mother died of fever; brothers and sisters living and healthy. Catamenia commenced at sixteen years of age, and she has been regular ever since. Had a child two years ago; had rheumatism eighteen months since; otherwise she has enjoyed good health, until two months ago, when she began to cough and expectorate a frothy material. Soon after these symptoms commenced, she began to experience a smothering sensation in her right chest, attended occasionally by a sharp pain in taking a full inspiration or coughing.

When admitted, she had a cough with purulent expectoration, a pulse of 92 beats per minute, and respiration 34. Physical examination revealed tubercular deposits at the apices of both lungs, and a cavity at the inferior angle of right scapula; respiratory murmur heard at the base of right lung.

On the evening of November 27, there was tympanitic resonance

over the whole of right chest; amphoric respiration and cough posteriorly, indicating pneumothorax.

November 28.—Pulse 120 beats per minute; respiration 36. Ordered—half a dozen wet and a dozen dry cups to chest, which was followed by considerable relief. On succussion, the clear splashing sound was developed. Heart's apex displaced two inches to left of left nipple, the respiratory murmur being still heard at base of right lung.

November 29.—Pulse 122 per minute; respiration 43. On the evening of this day, the dyspnœa became much worse, and the hands cool. Ordered—half a dozen wet and a dozen dry cups to be applied, opiates and Hoffman's anodyne.

November 30.—Three A.M.—Was called to the patient in great haste, and found her bathed in cold perspiration, with a dusky countenance, livid lips, cold hands and feet; pulse thready, rapid, and imperceptible; respiration 56 per minute, and very labored.

Paracentesis thoracis was immediately performed with a small trocar and canula, in the sixth intercostal space, two inches to the right of a line drawn perpendicularly through the right nipple, the liver having been depressed by the air in the pleura.

The moment the trocar was withdrawn, there issued a considerable amount of foetid air, and about a pint of decomposing sero-purulent fluid. A few minutes after the operation was performed, and a bent probe introduced to keep the incision open, the warmth returned to her hands and feet, the color to her lips, the perspiration ceased, the respiration became tranquil; and after administering  $\mathfrak{z}$ ij of wine, she went to sleep, and rested well for several hours.

Half-past ten A.M.—Pulse 108, full and strong; respiration 30, easy and natural; appetite good; respiratory murmur heard in nearly the whole of right lung, except at inferior angle of scapula, where it is amphoric; heart's apex in its normal position; there is some fluid still discharging from the opening. Ordered—quinine, gentian, sol. sodæ chloratis, wine, and opiates.

December 2.—Patient comfortable; appetite good. As the discharge was very foetid, threw injections of chlorine water,  $\mathfrak{z}$ ij, into the pleural cavity through the canula, which acted most favorably in dispelling the foetor, and at the same time producing no dyspnœa or irritation of the bronchial tubes. These injections were continued with great relief until December 5, when the materials for generating the chlorine gave out. Diarrhœa set in on this day, and all efforts to check it were ineffectual. She died December 7, nine days after the perforation, and seven days after the operation.

*Sectio cadavaris*, thirty-six hours post mortem.—Rigor mortis well marked. Cranial cavity not examined. Thoracic cavity—on opening this cavity, the whole of right pleura was found bathed in pus, which was very foetid; a perforation about a quarter of an inch in diameter existed at the point where the cavity was diagnosticated; the cavity itself was about the size of a hen's egg; another spot, an inch from the perforation and half an inch in diameter, was very thin; through the superior part of right lung there were deposits of tubercle. The

left lung contained a deposit of tubercle at its apex. Abdominal cavity—liver fatty, with some little inflammation of its peritoneal covering; kidneys were somewhat fatty. The other organs were healthy.

*Remarks.*—A few points of interest are presented by this case:—

1. The fluid was noticed in the cavity of the pleura, twenty-four hours after the detection of the pneumothorax.

2. The pneumothorax was not ushered in by any sudden increase of pain or dyspnœa, though the displacement of the heart indicated the presence of a great amount of air in the right pleural cavity.

3. The influence of the operation in prolonging her life for several days, for death would most certainly have taken place in a few hours, had it not been performed.

4. The opening, through which the trocar passed was left open, in order that the fluid might not reaccumulate.

5. The admirable antiseptic properties of the chlorine water, and its non-irritating effects in this case, though we know it to be a most powerful irritant to the bronchial tubes when inhaled.

*Case 2.—Phthisis and Pneumothorax.*—Sarah Robinson, single, æt. 20 years; admitted to Bellevue Hospital September 9, 1856; a woman of the town, of intemperate habits; has had syphilis; her father died of phthisis. She had been suffering about a year from cough and gradual loss of health, and when admitted, was sent to the surgical side of the house for an ulcer of the leg, where she remained until October 20; she was then transferred to the medical side. When examined, physically, there was found tubercular deposits at the apices of both lungs in the softening stage. Although confined to bed, she was pretty comfortable until the night of November 12, when she was suddenly seized with pain in the left side and great dyspnœa.

When seen the following morning, she was lying on her right side, with the body and head flexed forward; there was an anxious expression of countenance, cold hands and feet, great dyspnœa, and intense pain in taking a full inspiration or coughing. Respirations were 35 per minute, and labored, with an almost imperceptible pulse of 130 beats per minute.

*Physical Examination.—Inspection.*—Almost total loss of respiratory motion on left side of chest, with bulging of intercostal spaces. Heart dislocated to the right of median line.

*Percussion.*—Tympanitic resonance over the whole of left chest; on the right side the percussion was normal, the dullness at the apex having disappeared.

*Auscultation.*—On left side total loss of respiratory murmur; amphoric cough and voice sounds posteriorly; no other signs on that side. On right side, there was puerile respiration and prolonged expiratory murmur. Heart sounds heard in the median line and to the right; they were distant and indistinct.

*Diagnosis.*—Pneumothorax supervening on tubercles.

*Treatment.*—Opium to relieve pain, stimulants, and counter-irritation.

She gradually grew worse, and died November 14, 1856, fifty hours



after the perforation took place. There were no signs of effusion of fluid before death.

*Sectio cadaveris*, seventy-two hours post mortem.—No rigor mortis; cadaver emaciated. Cranial cavity not examined. Thoracic cavity—the left lung was completely collapsed, the pleural cavity contained only air; the heart was lying a little to the right of the median line; the pericardium contained about 3ij of fluid; there were deposits of tubercle at the apices of both lungs, though to a greater amount in the left; in order to determine the point of perforation, the left pleural cavity was filled with water, air was then forced through the trachea and began to bubble through the water from a small opening in the pulmonary pleura, situated in the anterior surface about midway between the apex and base, and an inch from the right border of the lung; the cavity, through the walls of which the perforation took place, was about the size of a marble, and the perforation was about the size of a pepper-corn. Abdominal cavity—liver of natural size, but fatty; kidneys enlarged and fatty; omentum contained a good quantity of fat; other organs healthy.

*Remarks*.—The only point worthy of special notice in this case, is that the pneumothorax existed for fifty hours before death, and no fluid was effused into the cavity.

*Case 3.—Phthisis and Pneumothorax*.—Frank Holmes, æt. 22; Irish laborer; admitted July 3, 1856. Mother and two brothers died of phthisis. Had never been very strong, though he enjoyed pretty good health up to three months ago, when he noticed a cough troubled him a little in the morning on first awaking, which was attended by muco-purulent expectoration. On exertion he would be troubled with dyspnœa, and sometimes palpitation; never recollected having had any sudden attack of sharp pain in his chest, or severe dyspnœa; had never had hæmoptysis or diarrhœa, but had been troubled with night sweats.

When first seen after admission, he had a pulse of 108, and respiration 30 in the minute, but without any great effort. There was very little motion of the right side, and it was much larger than the left, that the intercostal spaces were bulged out; there was no œdema of the lower extremities.

*Palpitation*.—The vibratory thrill was extinct on the right side; the heart's apex could be felt striking an inch to the left of left nipple.

*Percussion*.—Was tympanitic over the whole of right chest; there was some dullness at the apex of left lung.

*Auscultation*.—Amphoric respiration, cough, and voice, over the whole of right lung; puerile respiration over left lung, with prolonged expiration at the apex; there were no signs of effusion into the pleural cavity during life, though he lived five weeks after the pneumothorax was discovered.

*Diagnosis*.—Pneumothorax supervening on phthisis.

*Treatment*.—Was palliative, with good diet, wine and tonics. He remained some six weeks in the hospital, when diarrhœa set in and carried him off August 12, 1856.

*Sectio cadaveris*, thirty-six hours post mortem —Cadaver emaciated;

no rigor mortis. Cranial cavity not examined. Thoracic cavity—there was deposit of tubercle at the apices of both lungs, with a cavity the size of a walnut in the apex of right lung, in the walls of which there was a perforation the size of a buck-shot; quite a quantity of air issued from the right pleural cavity when it was opened; there were no signs of serous effusion into either pleura; the heart was found lying on the left of the median line, and was healthy. Abdominal cavity—liver and kidneys fatty; the large intestines were full of patches of tubercular ulceration; small intestine and other organs healthy.

*Remarks.*—The main point of interest in this case, is the period of time through which the pneumothorax existed without the air causing sufficient irritation to bring about the effusion of serum into the pleural cavity. It resembles the first case, in the fact that the perforation took place without any severe attack of pain or urgent dyspnœa; and as in the first case so in this, the dyspnœa, though at first slight, yet, toward the last became very distressing.

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*Phthisis and Death by Pulmonary Hæmorrhage in an Infant, aged three months, with Remarks.* By BOLLING A. POPE, M.D., House Surgeon to Bellevue Hospital.

C. H., born in Bellevue Hospital. The mother who is a native of Ireland, was treated during the last three months of pregnancy, in the first surgical division of the hospital, for ulcers of the cornea, and scrofulous disease of the bones of the arm. Two weeks after confinement, mother and child were sent to the surgical ward; the mother being still troubled with the above mentioned diseases. Upon a close examination of her case, to which attention was called by the cause of death in her child, I found that there was considerable deposit of tubercle in the upper part of the right lung; from which she has suffered no notable inconvenience, never having had hæmoptysis or other symptoms of phthisis, except shortness of breath upon over exertion. There was an abundant secretion of milk, and no emaciation.

The child was two weeks old at the time it came under my care, and seemed well nourished, and was of good size; skin quite fair and rather pale; eyes light blue; the child on the whole giving the impression of delicacy, though no obvious disease existed. A few days after it was attacked by a mild form of conjunctivitis, which was easily relieved.

About two weeks after its transfer, it had a slight attack of what seemed to be bronchitis, but soon apparently recovered, with the exception of a little cough now and then, which seemed to give it pain, and was followed by crying. Six weeks before death, it had another attack of bronchitis, which was also soon relieved. Another attack occurred four weeks before death; each attack being accompanied by more serious interference with respiration, which became quite rapid; with anxious countenance; no marked heat of skin, or notable interference with æration of the blood. Cough continued with some dyspnœa, until about two weeks before death, when there was another attack of bronchitis, with rapid pulse and respiration, troublesome cough, and paleness without marked heat of surface; sensibility was much increased

so that it started upon the slightest touch. The treatment during the attacks consisted in counter irritation, and an oiled silk jacket to the chest; small doses of Dover's powders, or of tincture of sanguinaria, and camphorated tincture of opium. The bowels were gently moved, now and then, by powders composed of mercury, with chalk, rhubarb, and bicarbonate of soda; the alvine discharges were unhealthy.

January 18.—Eight days before death, roseola appeared on the face and extremities.

January 20.—The eruption has entirely faded; cough continues troublesome, and respiration rapid. Physical examination showed nothing satisfactory except the absence of bronchitis.

January 22.—Better.

January 24.—Has been growing gradually worse since the 22nd. The pulse and respiration, especially the latter, very frequent; the countenance anxious, and eyes staring, with slight duskiness under the eyes. The child was allowed to breathe the vapor of tincture of opium for an hour, and at the end of that time was somewhat under its influence; the respiration having fallen from seventy-two to fifty-four, and the pulse from about 160 to 144. After two hours it slept quietly; the respiration at 48, and the pulse 140.

January 26, A.M.—Better. Nine P.M., called in haste and found the mouth and nose filled with clotted blood, and a small quantity flowing from the nose; about five ounces had been caught in a basin. It breathed for about a minute after I saw it; making not more than five minutes from the time the hæmoptysis commenced. It was nursing at the time of the hæmorrhage, and, upon giving a light cough, the bleeding began. There was some flow of blood from the mouth, after death; probably two ounces.

*Autopsy*, forty-eight hours after death.—Rigor mortis well marked; body pale, with some congestion of depending part of trunk. Cranial cavity—brain normal; venous sinuses empty, and but little blood in superficial vessels; no puncta on section. Thoracic cavity—heart and pericardium normal. Lungs—miliary tubercles found throughout both lungs; most marked in both, about the roots and posteriorly; the right lung was most involved, especially the lower lobe posteriorly and towards its upper part. About the first and second bifurcations of right bronchus, there seemed to be a dilatation, containing a small soft clot, which at first led to the suspicion of a cavity, though upon close examination, none was found. There was no evidence of inflammation in either lung; nor was there softened tubercle or a cavity found at any point. The larynx and trachea were both healthy and contained no blood. The bronchial tubes somewhat stained, but found none filled with blood. Under the right pleura costalis, there was a scattered deposit; none under the left. Abdominal cavity—the liver and spleen were both studded with tubercular deposit on their sub-peritoneal surface; the stomach healthy, and containing from one to two ounces of clotted blood; the remaining abdominal organs were healthy; no deposit in the glands of the mesentery; the tubercular matter was of a clear, rather glis-



tening white appearance, similar to boiled rice or barley; the intestines were very pale.

*Remarks.*—All are familiar with the rarity of this disease in infancy; though authors speak of its occasional occurrence in the lungs during foetal life. The absence of tubercles in those organs where most usually found in infancy, the point of greatest deposit, and the general diffusion through the lungs, are obviously worthy of note.

LOUIS, in one hundred cases of phthisis before puberty, found but two cases in which hæmoptysis occurred.

WALSHE says that in one hundred and thirty-one cases of death from phthisis, occurring under his observation, only two were by hæmoptysis; one was direct, but from asphyxia, not loss of blood. In the other, death occurred from exhaustion five days after the hæmorrhage.

The statistics of Bellevue Hospital furnish two hundred and fifty deaths from phthisis in the last twelve months, and of these two were caused by hæmoptysis, besides the present case. These two hundred and fifty cases were adults; the two deaths by hæmorrhage were in males, and the disease was in the third stage.

The two cases mentioned by Walshe also occurred in male adults. The amount and rapidity of hæmorrhage is not without interest. If we exclude the existence of a cavity, and the possibility of the hæmorrhage from the capillaries of the air cells, or of the common cellular tissue of the lungs, may not the fact that the deposit was situated at the roots of the lungs, where it would be most likely to interfere with the circulation of the bronchial mucous surface, the remaining source of hæmorrhage, throw some light upon the extraordinary termination of the case?

"Pulmonary hæmorrhage," says Walshe, "that is hæmorrhage springing from the *actual parenchyma*, occurs *with* or *without* recognized anatomical characters. In the first case, we meet with the nodular and the uncircumscribed pulmonary apoplexy of Laennec, petechial, and, lastly, interlobular hæmorrhage. No one of these anatomical states is *necessarily* productive of, or connected with, hæmoptysis; whereas, there is no established morbid anatomy of the most frequent variety of hæmoptysis, that depending on consumption.

"Molecular ruptures of the capillary vessels of the parenchyma are doubtless the cause of the discharge of blood in tuberculous diseases, except in those infinitely rare cases where a vessel of some size is perforated; but absolute demonstration of the fact is still a desideratum."

In the above case, there was no evidence of extravasation into the parenchyma, which would seem a necessary consequence of a rupture of its proper capillaries. It would, of course, be difficult to estimate the exact period that the hæmorrhage occupied, the stomach, in all probability, having become full before any notice was given. The fact that the child was nursing at the time makes this more probable.

The good effects of the inhalation of the vapor of laudanum in procuring rest, and relief from cough, and its tendency to restore the pulse and respiration to their normal ratio are probably not without

interest. Three hours before, the child had taken a full dose of opium without much good effect.

The mother had been upon the use of cod-liver oil and tonics for the last three months of her pregnancy, and during the life of the child.

*Case of Metastatic Abscess in the Posterior Part of the Orbit, Causing Protrusion of the Globe of the Eye and Loss of Vision—Evacuation of Pus—Subsequent Occurrence of Hip Joint Disease.*

By J. SMITH DODGE, M.D., House Physician to Bellevue Hospital.—

J. Fitzgerald; an Irishman; æt. 19; was admitted into Bellevue Hospital September 5, 1856, with the following symptoms:—dry, hot skin; frequent, irritable, but rather feeble pulse; tongue dry, with a whitish fur in the middle; great pain in the head, with a stupid expression of countenance; and slight internal strabismus of the left eye. The patient stated that ten days before, he had begun to have severe headache, affecting more particularly the back of the head, and increasing in severity to the date of admission. This headache was accompanied by great thirst and by constipation, but without heat of skin.

The dullness of mind cleared up in a day or two, and never returned; and about the same time a swelling appeared in the left parotid region. This proved an abscess and was soon opened; but others succeeded it in the neck, the malar region, and the temple, of the same side; and the external meatus discharged a little pus. While these abscesses were progressing, the left eye was noticed to be more prominent than its fellow, and it continued to protrude slowly for many weeks. The protrusion was accompanied by sleeplessness, emaciation, and gradual loss of vision in the eye affected, but without pain in the eye. The conjunctiva soon became œdematous, and remained so while the eye was prominent; and at a later period the lids became enormously swollen.

By the middle of October, vision was entirely gone from the left eye, but unimpaired in the right. By the 12th of the same month, the whole globe of the eye was without the orbit; the lids extremely swollen; the conjunctiva œdematous and protruding between the lids; vision entirely gone; no pain in the eye. Abscess of the orbit being suspected, an exploration was made at the outer and lower part of the orbit, but no pus was discovered. But on the 17th, Dr. Wood introduced the needle at the inner canthus, discovered matter, and, on opening freely, a large quantity escaped, (from one to two ounces,) permitting the eye to recede nearly to its normal position. Sensibility to light instantly returned, but no power of sight was ever regained. Matter continued to discharge for a week or two, and the opening then closed, the eye regaining entirely its natural appearance.

About the 1st of November he began to feel ill-defined pains in the left thigh, and great pain about the hip joint on moving the leg, which was habitually held closely adducted. No local applications controlled the pain, but it steadily increased and located itself definitely in the joint. The pains were augmented at night, and sleep was, for some time, only procured by large doses of morphia, or the use of

anæsthetics; towards the last, the pain became less severe, and natural rest was obtained. There was at no time any objective sign of inflammation at the joint.

From the first there was an obvious tendency to sink, and the appetite had constantly to be encouraged. Towards the end, he failed rapidly, and his emaciation was extreme. He died January 8, 1857.

*Autopsy*, thirty hours after death.—Lungs perfectly healthy; heart healthy; kidneys congested, cortical portion somewhat diminished, convoluted tubes filled with disintegrated epithelium. The walls of the orbit were perfectly normal, and nothing could be found to indicate the exact site of the abscess, but the adipose tissue immediately surrounding the optic nerve was very much condensed, and the nerve itself seemed compressed. The left hip joint was found to have been the seat of extensive disease; the head of the femur and the bones of the acetabulum were entirely laid bare, and so much corroded as to have lost their perfect shape. The cavity contained little or no pus. The brain was not examined.

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ART. VIII.—*Abstract of the Proceedings of the Medical Societies of New York.*

NEW YORK PATHOLOGICAL SOCIETY.

REGULAR MEETING, DECEMBER, 24, 1856, DR. ISAACS, *Chairman*.

Reported by E. LEE JONES, M.D., *Secretary*.

*Extra-Uterine Fœtation*.—DR. FINNELL presented a beautiful instance of extra-uterine fœtation. Julia Munson, æt. 27; born in New York; a prostitute. On arriving in this city, about the 20th of September, 1856, she engaged rooms at a ladies' boarding-house, stating that she had recently been delivered of a dead-born female child, of full term; that the lochial discharge suddenly stopped, and was the cause of her pain and distress in the right side; also, that the nurse neglected to put on a bandage, which was customary after confinement. At this time she had the appearance of general good health, with the exception of the pain in the right pelvic region, which was very severe at times, for a few minutes.

On the morning of the 21st of December, 1856, she was seized with a violent pain in the stomach, attended with vomiting; in a few minutes she became extremely pale, and said that it seemed as though something was bursting inside of her. After suffering severely for about ten minutes, the abdomen began to enlarge, from the presence of fluid, as evinced by fluctuation. Her voice became feeble, and in a few minutes she expired.

The *autopsy* was made twenty-four hours after death. On opening the abdomen, a gush of blood followed the first incision, the viscera were hidden from sight by the coagula; about ten quarts of blood were removed from the abdomen and pelvis. In the right pelvic region a tumor was discovered of the size of a fœtal head, adherent to the viscera of the pelvis, having the appearance of an aneurismal sac; on its removal with the surrounding parts, it proved to be the fallopian



tube with organized fibrinous coagula; the outermost of these had burst, and the hæmorrhage probably came from a plexus of veins on its surface. The tumor being opened by a crucial incision, the liquor amnii escaped clear and limpid to the amount of four ounces; a foetus of three and a half months development with the umbilical cord, six inches in length, inserted into the placenta at the bottom of the sac, composed the largest portion of the tumor; the uterus was enlarged, and contained the membrana decidua in a perfect condition.

DR ISAACS had examined for Dr. Purdy a woman, who was considered at the time of her decease, as three months advanced in utero-gestation; she died suddenly. On inspection, the abdomen was found filled with blood, which proceeded from a rupture of the fallopian tube; the foetus had escaped, and could not be found.

*Fibrous Tumor.*—DR. L. A. SAYRE presented a tumor, fibrous in nature. He removed it from the forehead of a woman, æt. about 55 years, of perfectly good health; the whole surface of her body was thickly covered with small encysted tumors. The tumor was firmly adherent to the skin, which seemed to be closely blended with the substance of the mass; it was attached to the periosteum, which was to some considerable degree destroyed by absorption. From the same position as this growth, a tumor (encysted) of the same character as those now over the surface of her body, was removed some years since.

*Enormous Aneurism of Innominata.*—DR. JAMES R. WOOD presented an instance of aneurism of innominata. He was indebted to Dr. George Lewis for the specimen; by whom the following detailed account of the case was prepared. The patient from whom this specimen was taken came under observation on the 28th day of May last, and from him I received the following history:—æt. 44 years; constitution good; habits temperate; he has been subject to occasional attacks of what he supposed to be rheumatism for the last five years.

For two years, at times, has been troubled with shortness of breath, and occasional pain under the sternum when walking rapidly or performing active exercise, which have increased for the last few months. He states that, on former occasions, when troubled with rheumatism, he has generally cured himself, but now has treated himself unsuccessfully for a period of three weeks. At present he complains of severe pains about the right shoulder; and the right hand is somewhat swelled and painful. A slight examination of the chest gives evidence of hypertrophy of the heart and insufficiency of the mitral valves. Supposing the heart affection to be rheumatic in its character, the alkaline treatment was prescribed without making a particular examination of the shoulder, and continued for a period of three days.

At the expiration of this time the pain and swelling in the hand had subsided, but continued without abatement in the shoulder. The obstinate persistence of pain in this locality led to the apprehension, that there might be something more serious than was anticipated; and a more critical examination was now made. The pain at this time was principally confined to the shoulder and outer extremity of the clavicle, both of which were painful on pressure; the clavicle was

raised by every pulsation of the heart. Above the clavicle in the right cervical region, an unnatural fullness and pulsation was observed, which could be traced below the sternum.

Auscultation discovered a well-marked aneurismal thrill under the clavicle and superior portion of the sternum, along the course of the *arteria innominata*. The strength of the impulse under the sternum, below the origin of the *arteria innominata*, extending to the right of the median line of the sternum, and downward toward the cardiac region, which resembled that communicated by the contraction of the heart against the thoracic walls, gave rise to the suspicion that the aorta was involved.

Repeated examinations confirmed this opinion, and I plainly stated to the patient my convictions with regard to the nature of his disease, and the impossibility of his recovery.

Dr. Willard Parker, now, at my request, saw the patient with me; also Dr. James R. Wood, both of whom confirmed the opinion previously expressed.

The treatment ordered was absolute rest, low diet, and sedatives to control undue action of the heart; also, some laxative pills to remove troublesome constipation.

During the month of July the pain was less troublesome, the action of the heart less irritable; and the general condition of the patient so comfortable, that for a period of two months he passed from under my observation, during which time I called three times at his residence, but was informed each time that he had gone to his business.

In the early part of October, I again saw the patient. A large, circumscribed, tense, pulsating tumor, now occupied the whole of the right cervical region, extending across the anterior portion of the neck, and pushing the larynx before it, which now could be felt at least one inch and a half to the left of the median line. The pulse was firm, rapid, and irritable; the pain about the shoulder, neck, and head intense.

From this time, the progress of the disease was gradual; the aneurismal sac enlarged in every direction. At times the pressure upon the larynx and pharynx was so great, as to cause troublesome dyspnoea and dysphagia. During the last three weeks of the patient's life, he complained of extreme restlessness; no position was comfortable; the pain in the head and neck continued with increased severity; there was numbness of the right arm, and weakness of the corresponding leg. The tumor steadily increased in size until its prominence in front was even with the chin, and extended until it occupied the entire left cervical region, carrying the larynx before it, which could now be felt in the left cervical region, and in a line with the angle of the lower jaw. At no time during the history of this case, was there complete aphonia. During the last week of the patient's life, dyspnoea was so great that he would frequently request his attendants to open the doors and windows; dysphagia during the last four days of his life was complete, in consequence of which enemata of beef tea were administered.

Early in the month of December, the integuments covering the tumor, which until then had been natural in appearance, began to as-

sume a dark livid hue at its most anterior and superior portion, extending over the entire summit of the tumor.

The measurement of the tumor, taken three days before the death of the patient, from its base in the right cervical region transversely across its most prominent portion to its base in the left cervical region, was thirteen inches. The measurement of the neck, including the tumor, was twenty-one inches. Diagonally from the middle of the left clavicle to the base of the tumor in the right cervical region, it was eleven inches.

On the first day of December, while sitting quietly in his chair, the integuments gave way at its anterior superior portion, and the patient died from loss of blood.

*Ovarian Tumor, containing Hair and Teeth—Death by Strangulation of the Intestines.*—DR. D. S. CONANT presented an ovarian tumor removed from a Negro woman, 35 years of age, who died on the 27th ultimo, four days after her admittance into the Colored Home, of this city. The tumor contained in one of its divisions hair and a number of teeth. The immediate cause of death was strangulation of the intestines. She had observed the tumor some ten years ago for the first time; since then it had continually increased in size up to her admission to the hospital, when she had much the appearance of a woman in the ninth month of utero-gestation; she was much emaciated with irritable stomach and almost no desire for food; pulse quick and feeble; she said she had had no passage from the bowels for nearly two weeks; all medicine given by the mouth were immediately rejected by the stomach, when stimulating enemata were resorted to with no effect; she died on the third day.

The autopsy was made by M. E. Thrasher who is at present remaining at the Home, and by whose kindness I am able to present the tumor to night; the main tumor was bounded in front by the abdominal walls to which it was firmly attached, posteriorly by the small intestines, cœcum, and ascending colon; the superior and left lateral border were attached to the transverse and descending colon; the sigmoid flexure and rectum not being involved; the omentum was either implicated in, or destroyed by, the pressure of the tumor; there was an infinite number of small tumors from the size of a small pea to a hen's egg, in the areolar tissue around the tumor, and also around the liver; these contained nothing but a viscid semi-fluid matter; the main tumor is from the left ovary, and divided into three compartments, developed from a multilocular mass about the size of a quart bowl; each of the compartments contained about a quart of thick lardaceous matter mixed with hair, similar to the hair mixed in mortar used for plastering; this hair is perfectly developed with a follicle like ordinary hair, and grows from the inner surface of parietes of the tumors; these three compartments of the large tumor communicate by small round openings about an inch and a half in diameter. These tumors, in being developed from the base, had enclosed a knuckle of the ileum, about four inches from the cœcum, and had, finally, entirely obstructed the passage through this portion of the canal, so that after the parts were removed air could not be blown through; projecting



from the multilocular mass above mentioned into one of the compartments of the large tumor were two processes of bony material, into which were irregularly inserted twenty-three teeth, composed of all the different varieties of teeth found in the adult jaw; there was also one small piece of cartilage shaped like a small humerus about one inch and a half long. The cells of the multilocular mass contained a thick viscid fluid, peculiar to such tumors. The left ovary contained about a half pint of the lardaceous matter mixed with hair; and there were several smaller tumors which had no connection with either of the previous, except by areolar tissue, which contained the same as the large ones, one the size of a hen's egg, lined by a crustaceous deposit from which the hair can be seen projecting inwardly, depends from the larger one posteriorly. In the multilocular mass were found three or four small irregular (bony) masses which had no connection with the larger pieces of bone.

*Ovarian Tumor—Successful Removal.*—DR. PEASLEE presented an ovarian tumor which he had successfully removed a few months since, on the 27th of October, 1856; she being again quite well. He observed that Cruveilhier has divided ovarian tumors into the unilocular, the multilocular, and the areolar. This is principally of the areolar variety, though there are also several sacs superadded to the areolar portion. Cruveilhier has admitted in a recent speech in the French Academy of Medicine, that no remedial measures were of any avail in cases of this variety of tumor, and yet said that the operation of removal of the tumor is not to be cited at all. Dr. Peaslee, however, disagreed with this high authority on this particular subject. For, as Mr. Cazeau has remarked, about two-thirds of those already operated on have been saved, notwithstanding the errors in diagnosis, and the other blunders consequent on the early attempt in a new operative procedure, and which experience is daily in some degree correcting. It should be remembered that in this variety of ovarian tumor the operation is the *only* thing to be thought of since the tumor is utterly incurable, as all are agreed in deciding; and that death is inevitable, if the patient is left to herself, within four or five years at the longest, after the appearance of the disease, in almost every case.

Recently, however, M. Boinet had called the attention of the French Academy to a method of cure in the other two varieties of ovarian tumors, which might in many cases succeed without a resort to the operation of ovariectomy. This consisted in the injection into the ovarian sac of about three ounces of the tincture of iodine—the same quantity being used whether the sac be very large or small. M. Boinet had cured thirty-one cases out of forty-five operated upon, from 1847 to 1856. He adopts a method not necessary to be explained here, by which the fluid injected is passed directly into the sac, then if possible brought into contact with its whole internal surface, and finally entirely withdrawn again, without any portion of it falling into the peritoneal cavity. No grave symptoms have ever followed his operations; and whenever they have followed those of others, it is, he asserts, because the tincture of iodine is allowed to enter the peritoneal cavity. Dr. Peaslee believed M. Boinet had done a great service to practical

medicine, and expressed a hope that the profession would not be slow in appreciating his merits. In the case under consideration, Dr. P. remarked that he had diagnosed an areolar tumor, and that it was confined by adhesions at its lower portions. It had by its downward pressure produced a prolapsus, and in fact, a complete protrusion through the vulva of the uterus and bladder, and this caused constant irritation and distress. The operation proved the correctness of the diagnosis; there being three bands confining the tumor, each about the thickness of two fingers. One of them was on the right side of the tumor (the left ovary being the diseased one), and two on the left. Finding it impossible to make any impression upon either of them by his attempts to rupture them, Dr. Peaslee passed a double ligature through the middle of each of them, and after enclosing each half in one of its portions, divided them. The pedicle was then also divided, after being also ligated in the same way. Thus eight ligatures remained; the last of which came off in six weeks. The patient had no bad symptoms after the operation.

The tumor presented a singular depression on its anterior face (it weighed ten pounds when first removed), bounded by a sharp firm edge, like an aponeurosis. This jutting edge led him while exploring the tumor through the first small incision, to believe it to be merely a strong band attaching the tumor to the abdominal peritoneum; and in attempting to detach it from the tumor he ruptured a vein in the substance of the latter, from which most of the blood lost in the operation proceeded. The hæmorrhage occurring, at once showed the edge not to belong to an adventitious formation, and the actual state of things was then at once detected.

Dr. James R. Wood remarked that he was always glad to have the subject of the removal of ovarian tumors recur. He referred to the want of success of the operations of Dr. Mott, Dr. Van Buren, and others, in this city, amounting to eight or ten operations in all, and still hesitates to advise its performance in any case. Dr. David L. Rogers had operated in two cases, one was successful; the other fatal in forty-eight hours, which he believes never was recorded. Dr. Valentine Mott, in two cases, operated unsuccessfully. Dr. Kissam removed an ovarian cyst, the patient died in a few hours. In Dr. William H. Van Buren's two operations, one was favorable, the other fatal. In one case operated upon by Dr. Willard Parker, the patient recovered; in another, the attempt was made to remove the tumor, but the adhesions were found to be so extensive as to compel him to desist; this case recovered. And it was chiefly owing to this fact, the impossibility of determining the extent of the adhesions, which induced him to decline operating in several instances. He thought the statements coming from our professional brethren in France, should be received with some degree of allowance.

The depression limited by the abrupt border presented in the tumor, showed that a sac formerly constituting a part of the tumor had burst, and discharged its contents into the peritoneal cavity.

Dr. Peaslee regarded this explanation of the depression in the tumor entirely satisfactory, and it had not before occurred to him. He, how-

ever, thought the question of the propriety of the operation of ovariectomy quite too important to be decided by the results of less than a dozen operations performed in this city alone. We should take into account *all* the operations which have been reported, already amounting to hundreds, and make our conclusions accordingly. If he (Dr. P.) were to decide from his own limited experience alone, he would say that ovariectomy is not a dangerous operation, since all his operations (four in number) have proved successful. But he knows very well, that he cannot always expect to succeed. His own experience *alone* would indicate that tapping is even more dangerous than ovariectomy; since he had two patients die after that operation. But these and similar questions are to be established, if at all, on a broad basis of facts. Dr. P. himself believed that thus reasoning on the subject, we must conclude that there are cases in which ovariectomy is as justifiable as any capital operation; and he attributed his success in great part to his having selected cases in which it was proper. At all events, he had refused to operate in many cases during the past five years; and he had never operated unless he could control the circumstances of the patient, just before and for a sufficient time after the operation. He hardly thought he would operate in a hospital, whatever the other circumstances might be.

*General Paralysis--Increased Solidity of White Substance of Brain.*

—DR. PEASLEE presented for Dr. Ranney, of the Lunatic Asylum, Blackwells Island, the brain of a patient who died of general paralysis. —C. L. S., æt. 36, by profession an actor, was on the 10th December, 1856, upon the usual commitment and certificate that he was a lunatic and dangerous to society, etc., removed from Bellevue Hospital to the New York City Lunatic Asylum on Blackwells Island. When admitted, he was found to be completely demented, paralyzed, unable to walk or stand, and with difficulty to swallow; he lingered nine days, and died on the 19th inst.

The following history of the case, communicated by his brother, together with the post-mortem appearances of the brain, indicate the form of the disease of which the patient died to have been paralysis generale. His brother states that he had always been a temperate man; some two years since, in consequence of domestic and business troubles, he passed through a period of great mental anxiety and excitement; a year ago last October, while in Philadelphia, he exhibited symptoms of insanity of a maniacal character, succeeded by a condition of prostration; upon recovery soon after of physical health, a change in his character was noticed; he became irritable, impatient of contradiction, at times despondent, and then very sanguine of success in his profession and business; his time, following such recovery up to April last, was spent in forming business plans, and studying the important characters of Shakespeare in the belief that he was to become a prominent actor, although his friends knew him to be incompetent in this respect from the great impairment his memory had lately suffered. When slightly excited, twitching of the corners of his mouth and tremor of the muscles of the face were noticed; his tongue was pro-



truded with difficulty, and his voice altered and cracked in its tone. All these symptoms increased in intensity about the beginning of April last; on the 8th of that month, he had a convulsion as described by his brother, of an epileptiform character followed by prostration; from this, he afterwards gradually improved until August last when he had another severe convulsion, followed by loss of consciousness for several hours; previous to this last convulsion, his left arm was noticed to have become paralyzed. He was then taken to Bellevue Hospital, and for a short time improved so as to be able to walk about the ward, and regained considerable power in the use of his tongue and arm. During the four months he remained there, his brother states that he had several convulsive attacks similar to those already mentioned, followed each time by increasing helplessness, and greater loss of mental power, until he became reduced to the condition in which he was brought to the asylum.

A more minute history of this period, should the Society deem it desirable, might doubtless be procured from the records of Bellevue Hospital.

The *autopsy*, fourteen hours after death, showed the skull about a quarter of an inch thick, and of texture less dense than usual; dura mater and arachnoids closely adherent over summit of cerebrum; arachnoid thickened and presenting an opaline appearance with serum beneath it and pia mater; general appearance of brain atrophied; the cortical structure somewhat softened and easily scraped with knife or fingernail from the white medullary substance beneath; this latter was found to be hardened, of firm texture and glossy in appearance; the ventricles were largely distended, and contained  $\frac{3}{4}$  of clear serum; the floors of both lateral ones had a feeling of roughness to the touch; the foramen of Monroe was large and patulous, easily admitting the end of the little finger; the middle or soft commissure was wasted to a thin ribbon of almost transparent membrane; the pons varolii and medulla oblongata were of less than usual size, and the pituitary gland shrunken, and the upper portion of its peduncle enlarged. The weight of the brain drained of the semen in its ventricles, was two and a half pounds which is some ten ounces less than the average given by Solly.

January 14, 1857.

*Ovum and Membranes.*—DR. CLARK presented a mass, apparently a clot of blood, discharged from the vagina of a patient, who, some six weeks since received a fall, which was followed shortly after by free uterine hæmorrhage. This continued for a time, and ceased about six weeks subsequent to the injury; pains simulating those of labor occurred, and the specimen on the table was thrown off. It was brought to him (Dr. C.) by Dr. Galvan, with the request that he would examine it, with the view of determining its structure. Externally, it appears as if it might be a clot, the outer layer of which has become disorganized, and the microscope discovered the debris of a clot and well-formed animal fibres, and abundant infiltration of coagulated blood. Turning over the specimen, there is seen a cavity lined by membranes. Thinking it might be the investing membranes of a fetus, he placed a portion under the microscope, and observed abundant villi of the chorion.

These, then, were the forming membranes from which an ovum had been discharged. The point of interest was, that there was membrane of an embryo, so entirely disguised by infiltration and coagulated blood in all its parts as not to be recognizable in any other way than by the microscopic inspection of its structure.

*Brain—Effusion.*—DR. HARRIS presented a brain removed from a patient in the Quarantine Hospital. Gustav. Nelson, a Norwegian, 21 years of age, was admitted July 22, from the *Luleo* from Gottenburg. His appearance was that of perfect health; his cheeks full and red; the eyes clear and bright; pupils perfectly normal and uniform; the tongue clean; the pulse normal. From a shipmate, who came ashore with him, and who spoke the English language very imperfectly, I could only learn that Nelson had suffered for several weeks on board of the vessels; and at one time had been quite delirious; he complained now only of excessive headache and debility; his appetite was good; the secretions abundant and normal. The following morning, the attendant orderly mentioned that the patient had been very uneasy during the greater portion of the night, though apparently unconscious of it; now he was quiet, but being unable to converse with him, we could not detect the cause of his former uneasiness. The following and the succeeding day, the same occurred again, when we found him continually muttering the same cry, and repeating the same unmeaning sound (ay! ay!) until roused by shaking him, or loudly speaking to him, but then only to relapse again to the same state.

A closer examination, which now became necessary, revealed nothing; no injury of the head could be found; the pupils responded equally to light; although scarcely able to use his extremities, difference in their motion could be observed. This state of things continued for several months, unabated by any medical treatment, with shorter or longer omission of these paroxysms; until, finally, they became more frequent and violent, though unchanged in their character, the patient's strength began to fail, and he died suddenly and quietly October 16, 1856.

The post-mortem examination revealed excessive distention of the ventricles, from about six ounces of perfectly clear serum.

*Necrosis of Superior and Inferior Maxillary Bones, Removal Successful.*—DR. D. S. CONANT presented the superior and inferior maxillary bones, for Doctor G. Grant, of Newark, N.J., with the following history:—Mrs. B., of Newark, married about the age of 20; general health had been good, with no serofulous taint in her parents or their family; no previous sickness, except at one time, during which she was salivated, with no bad results. During the first year of her marriage, when about four months pregnant, she was taken sick, in the fall of 1852, with remittent fever, which continued about three months, during this time she took, as is alleged, about 6 grs. of calomel. This caused salivation to such an extent, that the bones were entirely denuded of their covering, and the teeth, which were very fine and perfect, one by one dropped out. About nine months after this Dr. G. was called to see the case; finding the inferior maxillary bone almost entirely destroyed, and the superior maxilla of the right side, and a part of the superior maxilla of the left in the same condition, attended by an

excessively fætid discharge, he advised an operation for removal of the whole of the diseased portions. The consent of the patient having been obtained, he used in the meantime a solution of muriatic acid, to correct the fætor, and prepared her for the operation. On the 26th day of August, 1854, Dr. Grant, assisted by Dr. Baldwin, removed the whole of the superior maxillary of the right side, and the diseased portion of the left, by carefully dissecting off those portions of the surrounding tissues which were attached. The operation was attended with considerable pain and constitutional disturbance, and with little hæmorrhage, it being deemed inadvisable to use any anæsthetic. The patient recovering with so much vigor from this operation, it was deemed advisable to remove the diseased lower jaw soon, which was done four days after, the same gentleman assisting. This operation was conducted in the same manner as the other, by Dr. G. The patient rendered this operation more protracted and difficult by an hysterical convulsion. There was no hæmorrhage of any amount—the wound was left to heal by granulation; no ligatures were necessary. The condyloid processes of the lower maxilla remained healthy and intact. The patient rapidly recovered—no unpleasant results remaining, except what would naturally arise from the loss of the jaw.

The patient has had one child since, and this, with her other child, enjoys perfect health. She has had an attack of congestion of the liver, for which she has taken calomel, even to slight salivation, with no bad results.

*Colloid Tumor Developed from the Os-Femoris.*—DR. LOUIS BAUER laid before the Society a colloid tumor, of the size of a man's fist. The question of malignity or non-malignity attached to the specimen, gave it more than ordinary pathological interest. The tumor had required some two years to attain its present growth; and seemingly, originated from the left femur, posteriorly to the large trochanter; surrounded the bone on both sides, invested the crural artery, and caused incessant pains and loss of flesh. At one time it formed an abscess posteriorly, and on being opened, discharged viscid substance with some pus. The wound soon closed, leaving, however, a fistulous opening, through which bare bone could be felt.

About six months ago, Dr. Bauer was requested by Dr. Eisler to remove the tumor as far as practicable. After the portion presented had been taken away, the femur was found to be extensively carious. The carious bone was gouged off, reducing the remainder to a shell. Attempts were made at isolating the crural artery, and to remove the anterior lobe of the tumor also, but unsuccessfully. It had therefore to be left and the wound to be closed by suture. The latter cicatrized without great delay, by simple appliances, and the patient has since not only enjoyed a fair share of health, but acquired strength.

As far as Dr. Bauer could learn, the family of the patient was not afflicted with malignant disease, and the latter, himself, had been previously of undisturbed health. The Dr. called the attention of the Society, first, to the situation of the tumor. Its usual place of origin had been found by Lebert to be the omentum majus. Dr. Bauer thought that there was but one instance on record, where colloid had grown upon a bone.



As to the question of malignity, the opinions of pathologists differ. M. Lebert, of Paris, pronounced it unequivocally malignant; while Paget and Rokitansky reserved their opinion. Van der Kolk and Frerichs, however, are positive, that colloid has nothing in common with malignant tumors. Their opinions are based on numerous clinical and microscopical observations.

Frerichs particularly mentions that those large cells, observed in the kolla of this species of tumors, were not nucleated, but merely granulated, and he considers them to be the epithelial cells from the partitioned cavities of the tumor. That pathologist had collected some forty cases, that had invariably presented the same feature, and most of the patients had recovered where the tumor had been removed entirely.

DR. BAUER did not feel justified in expressing a decided view, having had but a limited experience on this subject, but as far as the present condition of the patient and of the formation of the tumor was considered, (having carefully examined the latter) he felt inclined to side with Van der Kolk and Frerichs, and he should like to hear Dr. Alonzo Clark's views of the nature of these growths.

DR. CLARK observed, that, in examining the nature of colloid disease, it is necessary to consider it as existing in two forms. One, in which the diseased tissue becomes infiltrated, and greatly thickened by a solid transparent matter, the structure presenting no cysts appreciable by the naked eye, and becoming as firm as the scirrhus variety of cancer. Of this variety, he saw an interesting specimen in the hands of the late lamented Dr. Swett. The other form constitutes a tumor, which is composed of fibrous stroma and cells, containing jelly-like matter, of greater or less consistency. Of the nature of the first variety he is not prepared to express an opinion—of the second, his examinations have extended to only three specimens. These were constituted of fibres, differing in no material respect from those of an ordinary fibrous tumor; the stroma being destitute of every thing which could be regarded as cancer cells, and cysts containing irregularly formed cells, or cells of doubtful character; and these alone could give rise to the suspicion of malignancy.

It has been his belief, that this second variety of colloid matter should be studied anew, with reference to this point, believing that the suspected cells could as well be considered epithelium of exuberant growth, as establishing an alliance between these tumors and cancer.

*Abscess of Ovary—Rupture—Peritonitis—Death.*—DR. THOS. F. COCK presented a specimen of abscess of left ovary, which discharged its contents into the abdomen, causing peritonitis and death. Louisa Charles, æt. 26; German; married; admitted October 2, into N. Y. hospital; has been sick about five weeks; was taken with a pain, not very severe, in the hypogastrium, could not be attributed to exposure, and was not at the menstrual epoch; catamenia came on about ten days after, and continued up to a week previous to admission; menstruation has always been regular. Has had, recently, nausea, and vomited her meals. On admission, skin hot; pulse about 110; a well-defined swelling in the hypogastrium, very tender—extending into left inguinal region; considerable pain in the back; anorexia;

bowels regular; tongue clean; countenance and conjunctivæ yellowish. Ordered—hirud. med. ad loc. dolor; sol. sulp. morp. at night.

December 5.—Bowels loose last night; pulse 112; skin hot; tongue furred; severe pains in the epigastrium, breathing anxious. One P.M.—Sudden seizure with severe pain in abdomen; surface cold; pulse feeble and frequent; face distressed; greenish vomiting. Ordered—stimulants; sol. sulp. morp.

December 6.—Revived somewhat yesterday, but sank and died this morning.

*Autopsy.*—Sero-purulent effusion in large quantity in the sac of the peritoneum; intestines united to each other, and to the abdominal walls by old adhesions; over them was a coating of recent lymph; several small hard tumors between the rectum and vagina; left ovary and left lateral ligament were occupied by a large abscess; a point of rupture was found on its posterior aspect.

*Phthisis in a Parrot.*—DR. E. R. PEASLEE presented a specimen of some pathological interest, in comparative anatomy. An instance of tubercular disease of the lungs, occurring in a parrot, a native of Africa, and brought from that country in the bark *Peru*, which was wrecked last winter. In taking to their boats, this parrot was saved by the crew. For the last three months, the bird has exhibited all the symptoms of phthisis, except expectoration; loss of appetite, flesh and strength; diarrhoea; occasional catarrh; excessive dyspnoea, and great irritability and querulousness.

Post-mortem examination discloses the right lung adherent to the costal parietes throughout its whole surface (as usual in birds), and scattered through its substance were several small tuberculous masses, most of which have been removed. The smaller mass is all that remained of the left lung. To this anteriorly and inferiorly was attached the large tubercular mass, filling up the whole cavity, and crowding down the heart and intruding upon the other lung. The ulcerated face of the mass rested upon the diaphragm, and pus and false membrane occupied the intervening space; thoracic glands were tuberculous; the inferior surface of the liver sparsely studded with tubercles; mesenteric glands were free.

*Unilocular Ovarian Cyst—Perforation of Appendix Vermiformis—Peritonitis—Death.*—DR. PEASLEE presented a specimen which had been sent to him by a distinguished physician in Paris, viz., a large sac, developed in the peritoneal cavity, in consequence of chronic peritonitis. On examining it at first, Dr. Peaslee at once pronounced it an ovarian sac, but on opening the account of the post-mortem examination, which accompanied the specimen, he found it expressly stated that “the uterus and ovaries were entirely free from disease,” and that this sac was the “result of a previous peritonitis.” The reputation of the physician alluded to had induced Dr. Peaslee to present the specimen; though still felt obliged to adhere to his first impression as to the nature of the sac.

The patient, a lady aged 39, had been under Dr. Peaslee’s care, a year ago, for dropsy, and which gradually diminished under tonic treatment. Though every thing in the history of the case pointed to

the probability that it was ovarian dropsy; still, Dr. Peaslee could not, by examination, both external and internal, discover any sac or tumor, and was therefore obliged to suspend his decision that it was ovarian disease. Meanwhile, the fluid continued to diminish; and to complete its absorption, she was advised to take a sea voyage. On her arrival in England, the fluid had apparently entirely disappeared, and she continued in perfect health till October last, when she was suddenly seized with symptoms of acute peritonitis. Being then in Paris, the physician alluded to was called. She died eight days after of the acute disease. At the first visit, his attention was directed to the fact that she had had a dropsical accumulation, but which had disappeared; and, on examination, he found there was still no dropsical fluid at all. Within twenty-four hours, it, however, began to accumulate, and continued to increase till death occurred. The following is the history of the autopsy, as drawn up by Dr. Bigelow.

*Post-mortem examination.*—A false membrane lined the entire abdomen, and was filled with a milky fluid—not adherent to the peritoneum or intestines, except by a few fibres of lymph in the cœcal region; from the rest it peeled off like the skin from a ripe peach; it lay upon the vertebral column, and had forced the intestines (which contained neither gas nor fœcal matter) in the hypochondria and epigastrium. This part of the disease is evidently of long standing, a chronic peritonitis of perhaps years. On removing this membrane, the cause of the recent acute and fatal peritonitis, became apparent. The appendix cœci was perforated at its free extremity by the foreign body sent herewith, and which was half way out of the appendix; the latter was completely disorganized, and pultaceous on its underside throughout its entire length; and a portion of the cœcum at the attachment of the appendix, and corresponding to its lower side as large as a quarter of a dollar, was in the same condition, so that my finger perforated it without the least effort. Fœcal matter and intestinal secretions had escaped by this channel into the cavity of the peritoneum. The intestinal and parietal peritoneum under the old false membrane was highly vascular, and could be, to a great extent, with recent plastic lymph, easily removed with the back of the scalpel. The sac contained ten to twelve quarts of the milky fluid spoken of, and the peritoneal cavity behind it contained almost a quart of transparent serum. I send one-half of the foreign body which perforated the appendix—the other half being lost. The uterus and ovaries were perfectly healthy. The other organs were not examined.

I would remark, as a very singular phenomenon in this case, the rapid secretion of so large a quantity of fluid in the old sac under the influence of a disease, wholly apart from it, as compared with the amount secreted outside of it, by the inflamed peritoneum, where indeed we might have looked for a like quantity.

DR. PEASLEE remarked, that the post-mortem examination showed that the acute peritonitis had been excited by a foreign body, in the appendicula vermiformis. This had finally caused a perforation of the latter, and was itself found half projecting into the peritoneal cavity. The sac Dr. Peaslee now presented, was found in the peritoneal cavity,



but was "nowhere connected by visible vessels to the peritoneum; being merely in contact with the latter, and easily peeled off from it," as "the skin of a ripe peach from the pulp." The sac contained ten to twelve quarts of a milky fluid. There was also about three pints of the fluid usually present, in cases of acute peritonitis, in the peritoneal cavity. It was remarked, as singular, that "so small an amount of exudation had been produced into the peritoneal cavity by the acute disease, while it had so rapidly produced such an abundant secretion into the sac." The foreign body which had caused the acute attack, was a concretion of phosphate and carbonate of lime, with hardened mucus and fecal matters, and was three-fourths of an inch long, by one-third of an inch in diameter.

Now, as giving some plausibility to the idea that the sac under consideration was the consequence of a previous peritonitis; Dr. Peaslee would also add, that the patient actually had puerperal peritonitis, about a year before she first came under his care, and before any dropsical accumulation had been observed. Still, the following questions occurred to him, and on which he wished to obtain the sense of the society.

1. Had any member of the society ever seen a case of encysted ascites (as this was assumed to be, in the report of the post-mortem examination, and which is recognized in the books)?

2. Can it be regarded as possible, that a perfect, closed sac, highly vascular and smooth externally, can be formed from the exudation of acute peritonitis, and subsequently secrete from the blood so rapidly, as this sac did during the last eight days of life.

DR. CLARK stated that he felt very sure he could see where the tumor was attached to some other part (doubtless the uterus), and that he had never seen an instance of encysted ascites.

DR. PEASLEE thought it might therefore be regarded as settled that this is a unilocular ovarian cyst, as he had at first considered it. And in the existence of perfectly developed sacs enclosing fluid, as a consequence of peritoneal inflammation, he would express his entire unbelief.

*Fatty Degeneration of Heart.*—DR. J. T. METCALFE presented a specimen of enlargement of the heart, removed from a gentleman, 47 years old, of temperate habits in drinking; otherwise, a free liver. Last Monday week he was not well, but went down town to his business. The next day he complained slightly. On the following evening he went to the theatre, not, however, feeling perfectly well. On Friday he was still more uncomfortable, and after dinner complained of a sensation of faintness, with pain in the left chest, extending to the arm and wrist of that side; while proceeding to the adjoining room, assisted by his wife, he fell down on the floor and died.

*Post-mortem examination* disclosed the lungs free from attachments, and engorged. Pericardium large, and the heart distended with dark coagulated blood; valves somewhat diseased; the walls of left ventricle thick and softened; and the microscope revealed the substance of the right ventricle in a state of fatty degeneration, being infiltrated with oil globules; no healthy muscular tissue; heart weighed

twenty-four ounces. Abdominal viscera normal; brain healthy in color, consistence, and vascularity.

*Vegetations in Larynx.*—DR. ROBERT WATTS presented for Dr. James W. Elliot, Abington Square, a specimen of chronic laryngitis, occurring in a child, æt. 2 years. First saw him July 22, 1856, apparently in good health and running about the house; my attention was called to the loss of voice, he could not speak above a whisper; at this time learnt from the mother that he had been gradually losing his voice since about the middle of May; first noticed when the child would cry. Gave expectorant mixture; he slightly improved, but continued nearly the same till Friday, September 5, when he was not so well; some dyspnœa with cough, particularly at night.

September 6.—Worse.

September 7.—Had an attack very analogous to one of severe croup, but *not* the *pure* croupy cough. Gave hyd. sub. mur. gr. iij, quinine gr. ij, pulv. ipecac gr.  $\frac{1}{4}$ , every three hours, continued these for twenty-four hours; the child much improved. Gave the same powders morning, noon, and night, for the next forty-eight hours, and afterwards every night; he continued to improve till about October 17, when he, once or twice, said a word in his natural voice. Still giving the same powders every night.

October 21 and 22.—Worse.

October 23.—Had another attack, but rather lighter than the first, and not as much resembling croup. Gave the same powders every three hours for twenty-four hours, and then night and morning (omitting the quinine). Gradually improved, but slower than after the first attack; dyspnœa continuing, though somewhat abated; but little cough.

October 29.—Suspended the powders, and gave potass. iod. in half-grain doses three times a day, and applied tinct. iodine to throat, but these appeared to irritate the child, and therefore discontinued them. Gave expectorant mixture with Dover's powders at night; always relieved after the mixture.

November 15.—Had a third attack, about as severe as the second. Gave hyd. sub. mur. gr. iij, pulv. ipecac gr.  $\frac{1}{4}$ , every three hours.

November 16.—About the same. Put a blister over the larynx, apparently much relieved when the blister began to rise; gradually improving, but very little.

November 19, at ten A. M.—An attack of suffocation lasted several moments. Parents thought he was dead; revived, and was about the same as before.

November 20.—Another attack of suffocation, about the same hour; did not last quite as long, and not quite as severe.

November 21.—Better. Giving nothing but expectorant mixture.

November 22 and 24.—Still improving. Same treatment.

November 26.—Child easy, but sinking from exhaustion. Died at eight P. M.

November 26.—Had but very little dyspnœa the day of death, and none at time of death.

It should be observed that he had no dyspnœa and but little cough between the first and second attacks, which were about six weeks from

each other; but between the second and third attacks, which were a little over three weeks from each other, the dyspnœa continued to considerable extent with some cough; there was moderate expectoration during the whole sickness, and sometimes very copious; the child was always relieved after an emetic of ipecac; always worse at nights than in the daytime, except the last three nights before death, when he was easier.

January 28, 1857.

*Aneurism of Arch of the Aorta.*—DR. L. BAUER called the notice of the Society to an unusually large aneurism of the arch of the aorta. Unfortunately, he could not give the history of the case in detail, as the patient was first seen a few days before his death.

The patient, æt. 37 years; nine months before his death, in stretching himself, found that something ruptured about his neck; and, immediately afterward, discovered a small pulsating tumor, which continued to increase until it acquired the size of about six inches in circumference. It was situated so as to press upward the sternal portion of the clavicle; at every point, pulsation could be clearly detected; its walls were exceedingly thin, and, every minute, rupture was expected. He died, finally, of suffocation and starvation.

On inspection, the arch of the aorta is seen so enlarged as to admit the hand. The heart presented a flabby appearance.

*Injection of Iodine in the Cavity of Joints.*—DR. BAUER next brought before the notice of the Society, the case of a diseased knee joint, which he had been treating with injection of iodine. He was more conversant with its history than in the former case, as the patient had been some months under his charge.

Man, æt. 22 years. Eleven years ago he struck his thigh with a hammer; inflammation of the joint followed; he was attended for a long time by a physician who ultimately succeeded in relieving the joint; but, the constitution seemed to be so much enfeebled that he was advised to go to sea. Soon after, he hurt himself again; great trouble and long suffering ensued. Some five months ago, Dr. Bauer's advice was asked; at that time the tumor was in length eight inches, and five inches wide; the knee was stiff, and the knee cap was adherent to the exterior condyle of the femur; fluctuation only was evident at one single point; the fluid seemed to be underneath the fascia lata. He suffered pain at internal portion of knee joint. Made a puncture, and removed twelve ounces of a yellowish liquid, which, under the microscope, seemed to be without organization, save a few cells; a considerable quantity of albumen, but no blood globules. Subsequently the old adhesions were destroyed, and the joint surrounded with adhesive plaster, and a straight splint applied; six weeks after the bandage was removed, the liquid had again collected, and iodine (3iss.) was injected; the effects of that injection were pretty intense. Two or three hours after the injection of iodine, there were developed great constitutional disturbance; heat of skin; pulse very high; and tongue dry; also, sneezing. In the main, the symptoms were similar to those in which iod. potassium is used. This condition subsided, and was followed by great exhaustion, which lasted for weeks afterwards. Yesterday morn-



ing, on removing the bandage, more fluid was detected, and removed by puncture, taking care that no air should enter; about nine ounces of fluid of great specific gravity, were evacuated. It is in a fine plastic condition, like syrup, of a slight red tinge; this seems to depend upon the admixture of blood; the original color was gray or yellowish. It was a matter of interest to ascertain if any iodine was contained in this liquid. None, however, was detected by the microscope, or by chemical tests. A great amount of fibrine was found; also, a great number of pus globules. The points of interest then, in this case are—the rapid absorption of the iodine, and its severe constitutional effects. I diagnosticated the existence of the fluid in the sub-rectal bursa. I mention this inasmuch as the collection of fluid there is extremely rare. It seems to be owing to direct mechanical influences; while the affection of the knee seems to be more of a consecutive nature.

DR. JAMES R. WOOD asked the question as to whether surgeons agree with the physicians as regards the effects of iodine thus administered.

DR. BAUER, in reply, stated that Nélaton observed a great number of injections in articular cavities, and his statements agree with the facts as stated above; that the same was the case with the English surgeons.

*Necrosis of Lower Jaw.*—DR. MARKOE exhibited a portion of a necrosed lower jaw bone, removed the day before at the New York Hospital, by Dr. Halsted. The history of the case was a very simple one, inasmuch, as no assignable cause could be traced. It occurred in the person of a man about the middle period of life, who, so far as could be ascertained, had not suffered from any injury of the jaw; had not recently taken mercury, and had not been exposed to the vapor of phosphorus. About five months ago he was attacked with pain in the face and swelling of the cheek, attended with rapid suppuration, opening beneath the jaw. The swelling increased, spreading along the jaw from the ramus on the right side to beyond the median line on the left. Other openings formed, through which dead bone could be felt. The swelling was very firm and hard to the touch. There were several openings inside of the mouth, and the teeth were loose. He was somewhat reduced by his disease. He was kept on nourishing diet, and a tonic and stimulant regimen for more than two months, when his condition having very much improved, an operation was performed for the removal of the dead bone. An incision along the margin of the jaw exposed the bone, which was found entirely dead, discolored, and as it were, worm eaten, but firm. It was sawn through opposite the first molar tooth, and the outer portion seized with strong forceps. It separated at the articulation coming away entire, and being dead to the very extremity. The other portion was pulled away in several fragments, in all reaching an inch beyond the symphysis. The sequestrum lay in a bed of granulations, which lined the inside of the solid swelling which had encased it; but in that swelling, which, before the operation, had felt so much like a bony involucrum, no bony deposit was found, except here and there a few sandy particles on its inner surface.

DR. MARKOE observes, that it would appear that this disease was be-

coming more common than formerly. Dr. James R. Wood had recently several cases; he had one himself at the Jews' Hospital; and there was one at present in the Bellevue Hospital. On looking over the subject he thought that there was something in the history of the disease yet to be supplied. He referred particularly to the absence of bony involucrum, and to the well-known fact of reparation taking place when larger portions of the jaw had been removed.

*Senile Gangrene.*—DR. MARKOE next exhibited the aorta, common iliac, femoral and popliteal arteries, taken from a patient dying from senile gangrene. The patient was an old man, between 60 and 70 years of age; while at sea a passenger stepped on his great toe, on which he had long had a bunion; inflammation followed, and the surgeon on ship-board applied some nitrate of silver, which seemed to aggravate the symptoms, and shortly after a sloughy appearance took place round the original bruise. Dry gangrene spread gradually from this point on to the great toe, reaching to its base and gradually involving more or less of the smaller toes, spreading up half-way along the dorsal surface of the metatarsus. This was accompanied by a good deal of irritative fever. The gangrene spread slowly after his admission to the hospital, but three or four days before the operation it presented an appearance which he has since regarded as of more significance than was at the time attributed to it. This appearance was that of a tongue or peninsula of reddened and inflamed integument, running up on the inner aspect of the foot above the ankle, and gradually falling into mortification. This seemed more like the mode of progress which obtains in mortification from obstructed arteries. Dr. Markoe had never seen this mode of rapid irregular extension in ordinary senile gangrene from enfeebled capillaries. The operation was performed below the knee, and, contrary to our previous experience, the mortification attacked the stump, the irritative fever increased, and the patient died within a week after the operation. He had examined the case after death with a great deal of interest, and the specimens presented seem to explain the unfortunate result.

*Autopsy.*—The heart is nearly normal, presenting only some slight ætheromatous deposits around the valves. In the aorta are seen numerous patches of ætheroma; some of the plates are calcified, others have disappeared, leaving a denuded surface. All the smaller arteries down to where the tibial was cut in the amputation are extensively calcified. This is still more marked on the tibials and radials, etc., some of which seem to be mere bony tubes or cords. Besides this calcification of the coats, however, there is observed all along the great vessels, and more noticeably in the smaller trunks, a puckering and irregular contraction of the coats of the vessels sufficient to diminish their calibre at different points. At the lower part of the femoral artery an annular contraction exists, so considerable, that the calibre of the tube is reduced to one-third of its proper dimensions. This seems to be due to a puckering in of all the coats of the vessel, at the point of ligature of the popliteal; although the artery is extensively diseased, yet a clot has formed within, and every thing about the ligature seems to promise a perfect and safe closure of the arteries. We have here, therefore, not only the enfeebled

condition of the capillaries, which is the ordinary cause of senile gangrene, but we have also an obstructed condition of the trunks of the vessels, just such, in effect, as obtains when these trunks are obliterated by adhesive inflammation. This, as far as Dr. Markoe's experience went, was a rare combination, and determined, no doubt, the spreading mortification, and the fatal termination of the case. If we have nothing to deal with but the enfeebled capillaries of old age, by amputating higher up nearer the centre of circulation, and therefore through stronger capillaries, we have no return of mortification in the stump, and, if other circumstances are favorable, the patient may do well. Every surgeon knows, on the other hand, the danger in amputating too soon in those cases, in which, in young people, gangrene is the result of arteritis with obstruction. Dr. Markoe believed that, as the pathological condition was so different in the two cases, a clinical distinction might be drawn; a distinction, if correctly drawn, of great practical importance, in reference to the question of amputation.

DR. MCCREADY stated that he had met with a case where dry gangrene in three fingers was caused by a tumor pressing upon the subclavian, in a woman, 30 years of age. In another case of disease in femoral and obliteration of anterior tibial arteries, there was dry gangrene of toe.

In reply to a question from Dr. Clark, Dr. Markoe said, that he did not mean to draw a distinction between inflammation and obstruction of arteries, for that in their results, as far as producing gangrene was concerned, they were nearly identical. The distinction he was insisting upon, was one between gangrene produced by loss of power in the distant capillaries, as of the feet and hands of old people, and gangrene produced by obstruction of principal trunks, such as occurs in young persons from arteritis. In the affection of the capillaries, Dr. Markoe had never seen the disease spread beyond the ankle, while in obstructed artery a whole limb often perishes, usually by successive attacks of gangrene. In the first case we may amputate safely; in the second, we operate with doubt, hesitation, and danger, because we do not know how high up the obstruction may be.

DR. E. R. PEASLEE remarked, that he had never yet known of a case of gangrene in a young person, where it was not owing to some obstruction; but, on the other hand, it seemed to him that the treatment of gangrene in old persons, went to show that it also often depended upon obstruction in the larger arteries. Practically he thought it might be difficult to decide what was best to do, for if amputation be resorted to, gangrene is apt to set in.

DR. JAMES R. WOOD thought this to be a very interesting subject, especially in a medico-legal point of view. He stated that the fact was settled long ago, that disease of the capillaries of the extremities was a cause of gangrene in both young and old. Also, that gangrene was sometimes the result of obstruction. He thought that the diagnosis between these two forms ought to attract the attention of the society, and hoped that either the subject would be discussed at some future day, or be referred to a committee to report.

*Tubercle in Cerebellum.*—DR. MARKOE next presented a specimen



of tubercle in the cerebellum, presenting the symptoms of hydrocephalus, with inflammation of the cerebellum, and marked symptoms of turning during life.

P., æt. 4 years,<sup>d</sup>died January 17, 1857. Was taken 30th December with what appeared to be remittent fever; after a few days, stupor came on, with dilated pupil, and he died with the usual symptoms of acute hydrocephalus. He was a delicate child from birth; premature, eight months; but seemed well until eighteen months old, when he had cholera infantum, which was very severe, and attended with some symptoms of cerebral irritation, mainly showing themselves in violent convulsive movements of the arms and legs. He recovered, however, and seemed again well, but weakly; did not walk till he was twenty-two months old, and never seemed strong on his legs.

At about the age of two years, he began to have turns of shaking his head, from side to side. This he would do until reprov'd, when he would stop; it was at first thought to be done in play. About this time also, he began to have spells of turning round; he would leave his play and turn round and round, slowly, with his eyes thrown up; when spoken to, he would stop, and go on with his play again. He seemed, however, to have an uncontrollable desire to turn round, and if he could get away, he would go into a closet or some out-of-the-way place, and go on with his turning. These turns would last days, and then cease; they recurred at intervals until within a few weeks of his death.

At the age of two years and ten months, he had a stupid turn come over him; appeared very dull; stammered in speaking, and had a vacant stare; this continued about three weeks, and then disappeared. From this time, his mother considered that his mind, which, before had been exceedingly bright and active, did not continue to develop.

At the age of three years and two months, he awoke in the night, screaming violently, and cried for two hours, putting his hands to his ears, but would not say that he felt any pain; this occurred several times. By the advice of his physician, he spent a summer at Rockaway, with great benefit to his general health; but, as winter came on, he declined again, though nothing was observed until his last fatal attack.

*Autopsy* showed substance of brain healthy; ventricles greatly distended with serum; fornix softened to a pulp; membranes injected slightly, and raised by turbid serum, most marked at the base; on the upper surface of cerebellum the serum had a purulent appearance; a tubercle existed on the surface of, and imbedded in, the substance of the lobe of the cerebellum; it was half an inch in diameter, and might be supposed to have pressed upon the crus cerebelli, over which it lay, though not in immediate contact with it.

DR. MARKOE regarded the occurrence of this tubercle in the cerebellum as the only circumstance he could fix upon, in explanation, of the phenomenon of rotation, and the experiments of Brown-Séquard, Longuet, and Flourens, show that injury to the crus cerebelli produces this turning. And he supposed, from the situation of the tumor over the crus cerebelli, that either the irritation which it caused on that point, or its mechanical presence, was sufficient to produce this phenomenon.

*Edema Glottidis*.—DR. ALONZO CLARK presented a specimen of œdema glottidis. Having read the account of the death of the Hon. Preston S. Brooks, of South Carolina, in the morning papers, he thought, possibly, in that connection, the specimen might interest the Society. He could not give a complete history, as he had obtained the specimen from a young physician who was, himself, but little conversant with its history.

The patient, a woman of the town, had been stout and hearty looking; had enjoyed good health a few days ago, when she seemed to take cold, and was confined to her room for a few days. After apparent improvement, she suddenly grew worse, her friends became alarmed, and the physician was sent for; he arrived fifteen minutes after, and found her dead. Autopsy revealed abundant effusion underneath the arytaeno-epiglottidean folds. In a word, she died of œdema glottidis. It struck him, as he read the history of Mr. Brooks' illness, that he must have died in the same way, although the statement is that he died of croup.

It is probably remembered by some members of the Society that the late lamented Dr. Beck prepared a paper on the cause of Washington's death, which he ascribed to the same affection.

*Supra Renal Capsules*.—DR. CLARK now exhibited some small sections of the supra renal capsules, of a patient who had been under the care of Dr. Taylor, in whom it was thought that no disease of the capsules existed, at the post-mortem, notwithstanding that marked discoloration of the skin that Dr. Taylor has described in his paper on the subject. Dr. Taylor left a small piece for his examination. He began somewhat in the dark, inasmuch as he had never examined these organs microscopically. The capsules have an external investment, from which fibres penetrate into the interior of the organ. The substance in the interior seems to be the proper organ. It is composed of a vast number of granular cells, in most of which there is a nucleus; the cells are of a large size, and some of them elongated; here there can be recognized a nucleus and nucleoli, but not in all of them. Between these cells is a moderate amount of fibrous tissue; the organ is most extraordinarily supplied with nerves. Where the nerves go, he cannot tell, for the piece examined was too short. It seems to him that the nervous element is an important part. The arrangement of the cells is somewhat linear, though not strictly so; there being a certain amount of areolar tissue running between them; this, then, seems to be the structure. He found no opening in any of these cells, but the whole interior is lined with a countless number of extremely minute and slightly yellowish granules, the office of which, he supposes, can be found out when we find what is the office of similar cells in the thyroid glands and spleen. These cells seem to have no communication with each other. In the examination of a section of the supra renal capsules in a person who died of tuberculous disease, this is the appearance; but, in Dr. Taylor's specimen, there is a world of fatty matter; the cells are full of oil globules, like fatty degeneration in the liver and kidneys; almost all the cells are so laden with this fatty substance, either in the form of globules, or in a crystalline form, that they be-

come opaque. There was also a great quantity of oil spread over the whole field; in other words he takes it to be a fatty degeneration; and, so far from being free from disease, he regarded it as very heavily diseased, although its bulk is not increased. The fibres are increased, and it seems probable that there is a double degeneration; an increase in the fibrous element, and afterwards a contraction to compensate for what would have been increased by addition of the oil.

DR. PEASLEE thought the discoloration of the surface, implied that the supra renal capsules must have some pretty important function. He was struck with the similitude of Dr. Clark's description of the microscopic anatomy, in relation to those given by Bergman and Kölliker. He stated that Kölliker divides the organ into two parts, cortical and medullary. That he describes the cortical portion as elongated closed tubes, called "cortical cylinders;" he believes the internal portion consists essentially of nerve cells. For the present, we can not suppose that they have any connection with the kidney. As to the differences presented by the two specimens, he thought Dr. Taylor's specimen was a well-marked case of fatty degeneration.

DR. CLARK stated that there were no cells which he could recognize as nerve cells.

DR. PEASLEE stated that Kölliker spoke of these cells resembling nerve cells, but does not speak confidently.

DR. METCALFE thought that the latest researches on the action of these bodies, as concerned with vitality, went very clearly to show that they were immensely important. He thought this proved conclusively by the experiments of Brown-Séquard on a large number of animals; in which cases, their removal was uniformly followed by fatal results.

DR. POST stated that Brown-Séquard informed him, the removal of the capsules caused death in a much shorter period, than when the kidneys were extirpated. That the longest period in which any animal lived, was thirteen hours; and that the operation itself was of little or no consequence in that connection.

*An Anomalous Concretion in the Rectum, with Cancer of the Uterus, involving the Rectum and Bladder, and establishing a Recto-Vaginal Fistula.*—DR. J. C. HUTCHISON presented a specimen having the following history:—Laura C., æt. 48, chambermaid, born in France, widow, and has two children; was admitted into Brooklyn City Hospital, October 21, 1856. Twenty-five years ago, she had an abortion, and soon afterwards symptoms were developed, which were supposed to indicate the existence of cancer uteri; for which she was treated in France and this country. No other reliable history could be obtained. When admitted into the hospital she was much prostrated; the cancerous cachexia was distinctly pronounced; she had a fætid vaginal discharge, and an almost constant diarrhœa, the discharges being involuntary, and taking place partly through the vagina. There was no irritability of the bladder. She was examined per vaginam, by Dr. H. S. Smith, who was then on duty, and extensive cancerous ulceration was recognized. She died November 4.

*Post-mortem Appearances.*—The examination was limited to the pelvic organs. The specimen shows entire removal of the cervix uteri



by ulceration, which, in the left side, has extended to the body of the organ, and the left ovary which is agglutinated to the left side of the uterus. The ulceration having cut off the cervix, has extended directly back, and involved the anterior portion of the rectum, to the extent of about one and a half inches longitudinally, establishing a recto-vaginal fistula. The upper portion of the vagina is also involved in the disease. There is, also, a tumor in the bladder, about the size of a filbert, an inch and a-half to the vesical termination of the urethra, and a little to the left of the median line, filled with soft cancerous matter. In the rectum, about seven inches from the anus, and immediately above the portion involved in the cancer, was found an irregularly rounded dark concretion, about one and a half inches in diameter. It consists of a hard shell, filled with a softer material, having a faecal odor. On examining the internal portion of the concretion under the microscope, Dr. Isaacs found in it vegetable cells, striped muscular fibre, and oil globules.

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## SOCIETY OF STATISTICAL MEDICINE.

REGULAR MEETING, JANUARY 12, 1856, DR. PEASLEE, *President*.

Reported by E. H. JAMES, M.D., *Secretary*.

*Successful Employment of the "Ready Method in Asphyxia" of Dr. Marshall Hall, in a case of Poisoning by Laudanum.*—DR. LEWIS read the following history of a case of poisoning by laudanum, in which he successfully resorted to Marshall Hall's new method of recovering persons drowned, or otherwise asphyxiated:—On the 15th day of August, 1856, Mr. J., a young man, æt. about 28 years; sound constitution and temperate habits; dined and passed the evening with a friend, in the course of which he was heard to complain of pain in his left side about the region of the heart, for which mustard was applied.

At ten o'clock he left his friend's residence, and made his appearance at his hotel about midnight, and shortly after retired to his room.

In the morning, the door of his room was forcibly opened, and he was found lying upon his back; his respiration stertorous, and not exceeding five or six to the minute; his pulse slow and full; pupils contracted; countenance livid; exhibiting no sign of consciousness. An attempt was made to arouse the patient by dashing cold water upon the face and chest, shaking, applying the salts of ammonia to the nose; but so profound was the coma, that no indication of consciousness could be elicited. Weak brandy and water was next introduced into the mouth, and an attempt made to produce deglutition by exciting the muscles about the pharynx, when, much to the surprise of the bystanders, his countenance became darker, and all respiration ceased.

The patient was immediately turned upon his face, in order that the fluid might escape; sinapisms were applied over the entire length of the spinal column, also over the extremities and chest, and artificial respiration commenced without delay.

For a period of five hours and a half, artificial respiration was constantly continued, with an occasional brief interval to enable us to determine whether all normal respiration had ceased. Dry friction was made simultaneously upward along the course of the veins, the beneficial effects of which were apparent.

During the time when artificial respiration was performed, the aspect of the case was very variable. At times the pulse was irregular and thready; at others, it was less frequent, more regular and firm. Equally great were the variations noticed in the respiration. When artificial respiration was for a time discontinued, respiration would continue with some degree of regularity at longer than natural intervals, and then become less frequent, and more irregular until artificial respiration was resumed. Once during the time that artificial respiration was continued, a pint of warm coffee was, by means of the stomach pump, introduced into the stomach with evident good effect, as indicated by improvement in the pulse and respiration, which, however, was not permanent. A stimulating enema of brandy and water was also administered.

After a lapse of four hours and a half, Dr. Cox saw the patient in consultation with me. At this time, the case was very unpromising. There had been no manifestation of consciousness; the pulse was irregular, frequent, and feeble; the pupils still contracted; the extremities cold and covered with clammy perspiration; and dissolution was apparently so near, that further efforts with hope of success seemed useless.

A flannel cloth saturated with aqua ammoniæ was now applied to the spine, and artificial respiration continued one hour longer, when normal respiration was resumed, and with it, was noticed a gradual return of consciousness. The following morning, his consciousness was perfect, although there was extreme nervous exhaustion, great mental depression, vomiting, loathing of food, etc., from which the patient gradually, but slowly, recovered. In the course of the day, an ounce bottle labeled laudanum, a few drops of which it still contained, was found concealed in the chimney flue, behind the damper. It was also ascertained that the patient had recently met reverses in business, and was laboring under pecuniary embarrassments, which doubtless induced that species of "moral insanity" that led him to contemplate suicide.

The points of interest in this case are, first, the manner of performing artificial respiration, which was in accordance with the directions of Dr. Marshall Hall, contained in the London *Lancet*, for recovering persons asphyxiated by drowning, viz.: by placing one hand upon the inferior and lateral portion of the chest, and the other upon the superior portion or shoulder, and rolling the patient upon the face, at the same time making moderate pressure, to force the air from the lung; the body was then rolled back, completing about one-third of a circle.\* This was repeated slowly, sixteen times to the minute.

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\* RULES.—1. Treat the patient *instantly, on the spot, in the open air*, freely exposing the face, neck, and chest to the breeze, except in severe weather.

The greater success which attends this mode of performing artificial respiration, Dr. Hall attributes to the fact, that when the body is placed in the prone position, the tongue falls forward, while in the old method with the patient in the supine position, it falls back into the throat, closing the glottis, and entirely preventing the ingress of air to the lungs.

The second point of interest is the manner of making dry friction of the extremities upwards along the course of the veins, forcing the

2. Send with all speed for medical aid, and for articles of clothing, blankets, etc.

*I.—To Clear the Throat.*

3. Place the patient gently on the face, with one *wrist* under the forehead ;  
[all fluids and the tongue itself then fall forward, and leave the entrance into the windpipe free.]

*II.—To Excite Respiration.*

4. Turn the patient slightly on his side, and
  - (i.) Apply snuff or other irritant to the nostrils ;
  - (ii.) Dash cold water on the face previously rubbed briskly until it is warm.

If there be no success, lose no time, but—

*III.—To Imitate Respiration—*

5. Replace the patient on his face, supporting the chest on a folded coat or other article of dress.

6. Turn the body very *gently*, but completely, *on the side and a little beyond*, and then *briskly* on the face, alternately ; repeating these measures deliberately, efficiently, and perseveringly. fifteen times in the minute *only* ;

[when the patient reposes on the thorax, this cavity is compressed by the weight of the body, and expiration takes place ; when he is turned on the side, this pressure is removed, and in inspiration occurs.]

7. When the *prone* position is resumed, make equable but efficient *pressure*, with friction, *along* the back ; removing it immediately before rotation on the side ;

[the first measure augments the expiration, the second commences inspiration.]

All these movements are performed systematically by the *same* individual.

*IV.—To induce Circulation and Warmth—*

continuing these measures :

8. Rub the limbs *upwards*, with *firm pressure* and with *energy*, using handkerchiefs, etc. ;

[by this measure the blood is propelled along the veins toward the heart.]

9. Replace the patient's wet clothing by such other covering as can be instantly procured, each bystander supplying a coat or a waistcoat.

Meantime and from time to time—

*V.—Again,—To Excite Inspiration—*

10. Let the surface of the body be *slapped* briskly with the hand ;

11. Or, let cold water be *dashed* briskly on the surface previously rubbed until it is dry and warm.

The measures formerly recommended and now rejected by me are,—the *removal* of the patient, as involving dangerous loss of time ; the *bellows* or any *forcing* instrument, and especially the *warm bath*, as positively injurious ; and the *inhalation* of *oxygen*, as useless.

The *inhalation* of dilute pure *ammonia* has in it more of promise.

The value of *galvanism* remains to be tested : can it excite the action of the *heart*, or stimulate the muscles of *inspiration* ; or, by inducing contraction of the muscles of the limbs, propel the blood along the *veins* ?—*London Lancet*, Dec. 13.



blood towards the heart, as directed by Dr. Hall, the beneficial effects of which were too apparent to pass unnoticed.

The third point of interest is the length of time during which it was found necessary to keep up artificial respiration, it being full five hours and a half. From the partial examination which I have been able to make, I think it unusual for persons to rally who have been so thoroughly overcharged with narcotic poison, as to create the necessity for the continuance of artificial respiration so long a time. The details of but few cases are recorded, and I have noticed no instance in which artificial respiration was successfully performed for a longer period than four hours.

DR. PEASLEE remarked that this case of Dr. Lewis' was an extremely interesting one, as it is the first instance among us in which a practical application of Dr. Hall's method had been made. He considers this an improvement possessing advantages over all other methods of treatment, as we can by it introduce a greater quantity of pure atmospheric air into the lungs than by any other means, it being three-fourths as much as in normal respiration. Another advantage is that we have the means of operating always at hand, and the treatment may be pursued as well in one place as another, while other methods are subject to more or less delay in providing the necessary means. Each moment of delay is fraught with imminent peril to the patient. In restoring persons from drowning there is no time to be lost, for as long as the asphyxia continues the patient is in nearly as much danger as if he were still in the water, hence the necessity of prompt and energetic action. He is inclined to think favorably of the application of cold to the head, and heat to the extremities. If the pathology is congestion of the medulla oblongata, preventing impressions being conveyed through the pneumogastric nerve, our course should be to remove this congestion. He has made use of this treatment in cases of children poisoned with meadow parsley, and always with prompt effect. The medulla oblongata being the centre of the respiratory movements when it is disabled by congestion we should, in addition to removing the congestion, continue our efforts at artificial respiration until the cord resumes its function. Acting upon this principle, it would seem in theory, that if artificial respiration was continued long enough, these patients would all recover.

*Infantile Pneumonia.*—DR. J. LEWIS SMITH read a paper on Infantile Pneumonia, of which the following is an abstract:—In the latter part of December last, Dr. Smith was called to visit an infant a few days old, who was born with two large blebs of pemphigus. The eruptions healed by a simple application, leaving reddish cicatrices, and nothing more was heard of the family till January 25, when he was again asked to see the child. The mother informed him that it had remained well from the date of his last visit till two days previously, when it began to cough, and that this symptom was gradually becoming more frequent and severe. The physiognomy of the little patient did not indicate much suffering, or a grave disease. He was lying on his back with respiration somewhat hurried, but its rhythm not materially disturbed, and the expiration not accompanied by a

groan as is common is the pneumonia of children. The resonance on percussion of the chest posteriorly was rather dull on both sides, and the respiratory sound feeble with distinct crepitation. The syrup of squills and counter-irritation were ordered.

January 26.—Symptoms less favorable. Pulse frequent and feeble; paroxysms of cough severe, and sometimes after them he lies several minutes without breathing, apparently from spasm of the diaphragm or larynx; little or no expectoration; the breast refused. Wine whey was ordered, but without improvement; and the following evening death ensued.

*Autopsy.*—Thoracic organs only examined. The anterior portions of the lungs presented a healthy appearance, but the posterior surface was mottled, some of the lobules being solid and having a dark red color. By strong insufflation these lobules, with the exception of a few, became crepitant, though somewhat still depressed.

This case derives its chief interest from the antecedents of the family. The father is suffering from syphilis—that most deplorable of all conditions for a married man—and the syphilitic taint has been transmitted to all his children. Four of these have died, and three are alive all scrofulous, except as they have been in a measure renovated by cod-liver oil. Of the four deceased, one died in convulsions consequent on the suppression of an impetiginous eruption of the scalp; and the other three, the case of one of whom is the subject of this paper, of a pulmonary affection, apparently the same in all, coming on at about the same age, and running a brief and similar course.

The following are the points of interest in the case:—1. The congenital pemphigus. This eruption existing at birth is regarded by dermatologists as a reliable sign of the syphilitic taint. Pemphigus then forms an exception to the rule as regards syphilitic manifestations, which do not usually occur till the infant is a few weeks old. 2. The nature of the disease by which the children, or at least the child, died. The diseased lobules, one after another, became crepitant by insufflation, but great force of the breath was required to effect this change. It is generally believed that if a lung, having the appearance of solidification from pneumonia, can be inflated, the morbid condition is not that of inflammation but collapse. A recent French writer, M. Bouchut, however, denies that inflation is a proof of collapse, stating that, in cases of undoubted pneumonia, he has often succeeded in blowing air into the vesicles of the solidified lung. It seems probable that the pulmonary cells, though containing the exudation of pneumonia, may be distended so as to receive air in addition. This is the opinion expressed to him by an eminent pathologist of this city, and if it be true, the case, rather than the possibility, of inflation, must be considered the proof of collapse. That this child had pneumonia is evident from the fact that, notwithstanding very strong insufflation, a few of the lobules remained solid. These sank in water. He thought that by greater strength of the breath, they might have been made to crepitate like the rest. 3. As to the cause or causes of the disease. In Dr. Smith's opinion, the attack commenced in hypostatic congestion, induced by position. Position as a cause of pneumonia has been much

overlooked by physicians this side the Atlantic. In Europe it has engaged attention. Billard attributes the frequent occurrence of inflammation in the right lung of infants, in the Hospice des Enfants Trouvés, to the nurses placing them on that side; and Bouchut, speaking of pneumonia, remarks, "Who has not observed it come on among children just brought to a hospital under the influence of dorsal decubitus \* \* \* \* " In the adult, during the progress of asthenic diseases, pneumonia not unfrequently occurs as a complication, in consequence of the recumbent position; and, why may not debility and recumbency, in like manner, lead to pulmonic congestion and inflammation in the infant? In this child, Dr. Smith inferred, that the morbid process commenced in simple stasis of the circulating fluid, from his feebleness, from the latency of his symptoms (for latency is known to characterize pneumonia from hypostatic congestion), from the position of the diseased lobules, from his lying much of the time on his back, and from the fact that the disease was not preceded by bronchitis, as is usual in infantile pneumonia. 4. It is a little remarkable that three children in this family should die of the same age, and apparently of the same complaint; but if we regard the syphilitic cachexia as the predisposing cause of these attacks, we may perhaps understand the reason of this identity of time; for it is not generally till the infant has reached the age of a month that hereditary syphilis begins to produce an appreciable effect on the condition of the system.

February 9, 1857.

*Hiccough.*—DR. CORSON read a short paper on hiccough, based upon a case of diaphragmatic pleuro-pneumonia, treated by him and attended for three weeks with this distressing complication. He prefaced his remarks by saying, that any symptom, of however little importance in itself, that may, under any circumstances, cause the death of the patient, becomes a matter of serious consideration, and deserves the attention of this society. The case presented by Dr. Corson occurred in a man of about 57 years of age, who, after exposure to cold, was seized with severe chills, pain in the side and epigastrium, accompanied by great dyspnœa, dry cough, nausea, vomiting, constant wakefulness, and exhausting hiccough. He was at first treated with purgatives, assafoetida, sulph. ether, and afterwards with cupping, blisters, musk, and chloroform, which failing to afford relief, morphine was added to the list, at the same time supporting the patient with beef tea and wine. This treatment was continued, with little variation, until the ninth day of the attack, before sleep was obtained or relief from hiccough afforded. In reference to this subject, Dr. Corson remarked, that the above was the only case of which he had any knowledge, where the seat of the irritation was situated above the diaphragm; also, that its being protracted for the space of three weeks, and for nine successive days during this period the patient had no sleep, rendered it a case of more than ordinary interest. He mentioned that he had known several cases of protracted hiccough where the efforts of the physician had been repeatedly baffled, rendering the case exceedingly annoying to him, as well as distressing to the patient. He related the case of an Irish ser-



vant girl who, in consequence of fright, was seized with hiccough, which continued for about six months, during which time she was subjected to every variety of treatment, till at length a camphor moxa along the whole length of her spine caused such a shock as to frighten off the disease, as it had been frightened on: a good illustration of "*similia similibus*," etc. When this affection occurs in connection with inflammatory diseases, or low grades of fever, it becomes a very serious affair to the patient, and a source of great anxiety to the practitioner. Where the affection is purely nervous, he thinks musk and castor more particularly adapted to the treatment.

Dr. PEASLEE remarked that to him the subject was extremely interesting; there are often cases where it seems impossible to put a stop to it. In the case of the servant girl related by Dr. Corson, he would first direct his attention to the menstrual function; he does not remember of any case where the cause of irritation was above the diaphragm.

Dr. SEWALL related a case of hemiplegia extending upwards until the stomach became involved, when hiccough supervened, and the patient died from gangrene of the stomach. He thinks this affection may be regarded as a symptom pointing to gangrene of the stomach.

Dr. PEASLEE said that he had seen the affection gradually arrested by chloroform administered internally, in doses of fifteen drops in mucilage every twenty minutes.

Dr. BULKLEY remarked that these cases occasionally occur in the New York Hospital, where they are usually treated with opium or morphine, or musk; he has never used chloroform, and has never known of a case proving fatal.

Dr. CORSON remarked that he had forgotten to mention that his patient, during the chill, had drunk a large bowl of hot ginger tea, and the hiccough following soon after, it was at first supposed to result from that cause. He supposes that one reason why this affection so seldom attends diseases of parts above the diaphragm may be from the increased weight of the parts in congestion, or inflammation, or effusion, holding the diaphragm down, and thus preventing spasmodic action.

Dr. PEASLEE remarked that this seemed quite reasonable, for if we distend the chest, the diaphragm is pressed down, and there it must stay till the pressure is removed. He thinks there is room for the question, whether the ginger tea did not cause the hiccough? This occurs in his own case; if he swallows any thing of that nature, hiccough is sure to supervene. The phrenic nerve having so many distributions, there are, probably, many different sources of irritation, from which this affection may proceed. From the little attention which he has given the matter this evening, he is inclined to make three divisions of hiccough. 1. From general nervous irritation. 2. Extreme debility of the nervous system, from want of vital energy enough to keep up a regular action, as in persons dying of fever, poison, hernia, etc. 3. Local irritation of some part contiguous to diaphragm, generally of the stomach. It is important that we discover the cause, as in one case no treatment will be necessary, while another may require local, and a third general treatment.

*Cases of Puerperal Convulsions.*—DR. SEWALL reported the following cases:—*Case 1.*—Mrs. K., æt. 21, of a full habit. About seven months gone with first child. For two or three weeks past has complained of throbbing headaches, with flushed countenance in evening, and so much heat that she has held her head under the running croton to cool it. In the morning has looked pale. Of late, has had anorexia, with sense of weight at epigastrium and occasional vomiting. Two days ago took salts, which were immediately returned. Is said to have vomited this evening, without any previous nausea. Bowels by report regular. Has been out of doors every day, and done her own work.

At nine P.M., was found lying, face downward, upon the bed in a spasm. At half-past nine found patient in husband's arms, violently convulsed, with eyes rolled up, frothing at mouth, muscular rigidity, and stertorous breathing. In two or three minutes a subsidence occurred of these symptoms, only to be renewed after an interval of five minutes, in which there was no return of consciousness whatever. The countenance was puffed; legs œdematous; and body generally anasarcaous; pulse full, not hard, 100. After some six or eight spasms, during a period of half to three-quarters of an hour, without any gleams of consciousness, she was bled to o.ij. No spasm occurred from this to twelve, when one only appeared, although there was constant rolling of the eyes always to the right side, and occasional stiffening of the muscles of the neck. After the venesection, a stimulating enema was administered, which provoked free catharsis, and sinapisms were applied to ankles. At twelve, by advice, ten leeches were applied to temples, after which slight gleams of consciousness appeared.

May 2.—No paralysis, no paroxysm, but frequent rolling of eyes; swallows readily; consciousness very indistinct. Mercurials were ordered, from which a free defection at noon occurred. At six P.M., was delivered without difficulty of a dead female child, well formed. Placenta came away readily, but no natural lochial discharge was ever established. After birth of child, much prostrated, with feeble pulse of from 80 to 100. Although re-action ensued, yet there was no apparent benefit to the patient six hours after parturition. Pupils dilated, contract feebly under light; consciousness very slight.

May 3.—Urine free, passed voluntarily after taking nitrous ether; appears brighter; can with difficulty be aroused to a slight recognition by signs of what is said to her, but soon relapses into dull heavy slumbers. Frequently exclaims, "I can't see," although hearing seems perfect, pupils equal; rolling of eyes to the right continues at times. Continue mercurials. Blister to nape of neck, to be dressed with strong mercurial ointment. Insists upon always getting out of bed to pass urine, or for her alvine evacuations.

May 4.—Good effect from blister; some show of consciousness, no paroxysm; no paralysis; slight rolling of eyes to right, for which inhales chloroform; slumbers much; pulse always regular, from 90 to 100, of good character; no nausea nor vomiting; mouth not sore. Omit calomel.

May 5.—Some nausea with retching, probably from chloroform; some return of spasmodic movements with turning of the eyes; is without sight, pupils dilated, contract sluggishly under strong light; pulse 90, regular. Calomel gr. i. every four hours. Has had two or three small dejections.

May 6.—A strong epileptic spasm at nine A.M., the first distinct one since Friday the 2nd; ten leeches applied to temples did not relieve, as the convulsions continued at short intervals. At four P.M., head was shaved and covered with a cap blister. At ten, blister had freely drawn. The convulsions were of varied severity, from one to two minutes duration, preceded by strong rotation of eyes upward and to the right, hiding the iris, characterized by spasmodic twitches of the neck also to the right, with frothing at the mouth, and followed by short stertor. These were continued at intervals of from ten to twenty minutes in P.M., and through the night. No convulsive movements of trunk or extremities accompanied them; bowels open; urine free; pulse 86 to 103; perspirations natural; tongue much swollen from a bite; very slight effect constitutionally from calomel. Continue it with mercurial inunctions to thighs; is taking also gr. i. assafoet. and valerian.

May 7.—Blister has discharged very freely; spasms occasional, with violence, and most severe when lying on right side; rolling of eyes perpetual. At three A.M., many severe convulsions. At two P.M., a very violent and protracted one occurred. From that time a favorable change ensued; pulse from 38 to 100 and 120, of natural force; respiration tranquil; no nausea; a free dejection after enema; blister dressed with mercurial ointment; refused medicine during day.

May 8.—Very quiet since three P.M. yesterday; some rolling of eyes again this morning; blistered surface dressed with basilicon; urine free; sight gradually returning; is conscious of external circumstances; takes a little nourishment readily; trifling movement of eyes in P.M.; answers questions by nods; pulse at five P.M., while sitting up, 104; some flushes of fever this P.M., with restlessness; had a movement from bowels after a mercurial purgative.

May 9.—As no decided constitutional effect had been procured from mercurials, they were further administered with that view, by inunction and otherwise, especially as a tendency to spasmodic movements is still apparent; pulse 90, soft and regular; sat up half an hour; is conscious and answers questions by nods; anti-spasmodics were continued.

May 10.—No further anasarca noted; no more change in the axes of the eyes; pulse 110; respiration easy; skin moist and warm; countenance calm and pallid; slept quietly all night, and awoke naturally; slight mercurial factor. Omit calomel.

May 11 and 12.—Improving; ptyalism well established; smiles and replies to questions; does not see perfectly clear; no further spasmodic movements of any sort; has an appetite.

May 13 and 14.—Ptyalism troublesome, with difficulty of deglutition and tumefaction of cervical glands. Takes sulphur and astringent washes. Complains of soreness of arms; upon right is a large purple discoloration near the point where venesection was performed, but not



involving it. There are no others upon any part of the body; no especial prostration is evident.

May 15, 16, and 17.—Steadily improving; mouth clearing up; ecchymosed spot upon right arm has disappeared; pulse 100, soft, full; appears cheerful, talks freely and sits up occasionally; takes broth with relish.

May 24.—Sits up nearly all day; mouth about well; very cheerful and spirited with a great appetite; sleeps well; bowels well; pulse 86 to 90 during the week.

May 26.—Moves freely about room and abounds in good spirits; has no recollection of any thing that occurred during first nine or ten days of illness; reports no tendency to spasm in any of her family, and no illness ever before in her life, save a severe attack of diarrhœa nearly a year ago.

Three or four times during her sickness, and accompanying the spasms, a disposition to laughter was observed, as if an hysteric element was mingled with the epileptic.

Case 2.—Margaret M., æt. 29; German.—November 14, 1856.—Aborted about the sixth month of pregnancy, having been engaged just previously in collecting coal; a well-formed fœtus and appendages were removed by husband.

November 16.—Was seen by a German physician on account of convulsions, for which Hoffman's anodyne was administered.

November 17.—Found patient on her back in a state of insensibility, from which she could not be aroused. The pupils were dilated, and only partially contracted by strong light. Abdomen was soft, without tenderness, and the lochial discharge was well established. Pulse soft, about 100; countenance pale; many convulsions of an epileptic character was reported as having occurred during the night, affecting chiefly the right side. A blister was ordered to nape of neck; cathartic of oil, and anti-spasmodics.

November 18.—Blister has drawn well; convulsions less severe; oil had operated.

November 19.—Appeared better; is for the first time conscious; nods her head to queries; protrudes tongue for the first time on being asked; convulsions fewer, and less severe; left arm paralyzed; pulse continues soft, but more rapid; in one breast has considerable milk; lochial discharge continues; may continue anti-spasmodics.

November 20, 21, 22.—Gradual returning to consciousness, with hysterical symptoms; loud crying and laughing at intervals; mild purgatives were continued with the anti-spasmodics; nourishing diet was well taken.

November 24.—Appears much better; is fully conscious, and reports very favorable; is regaining the use of left arm.

November 25.—Was summoned in haste at ten A.M.; learned that patient had gone on doing well till evening, when the convulsions returned with violence, and continued with very brief intervals through the night; is now in a paroxysm, and has been for an hour; violent twitching of right side of the body, and limbs of same side, with frothing at the mouth, and rolling of the eyes; pulse 120, full, approaching hardness; venesection to  $\frac{3}{4}$ xxx.; after this the convulsion

gradually ceased, and shortly disappeared. Chloroform was given internally. At three P.M., found her in a deep, but tranquil sleep, which had continued for three hours.

November 26.—Reports better; is conscious, and has had no more convulsions.

November 29.—Is quite restored, and smiled upon me at the morning visit.

In this case, no œdema was any where noted.

Dr. BULKLEY remarked that the first case reported by Dr. Sewall, was a highly interesting one. He thinks the affection of the sight resembles those cases of amaurosis, which sometimes accompany albuminuria, a condition of the kidneys in which it does not answer to give mercury. He sometimes uses blisters; he mentioned the case of a patient who had several relapses of this disease from exposing himself to cold while undergoing diaphoretic treatment. At each relapse, there was trouble in the head, and speedy relief followed the application of the blister. At one of these exacerbations, a blister was ordered, and the next morning the patient found better, but it was ascertained, on inquiry, that the patient had fallen asleep before the time for applying the blister, and recovered from the pain in the head without it. In all these cases our attention should be directed to the kidneys. Convulsions depend upon uremia, whatever may be the cause, whether fatty degeneration or desquamation, or simple congestion of the kidneys. In puerperal women, he thinks there is no desquamation, but wished to hear the views of the president on this subject.

Dr. PEASLEE agreed fully with Dr. Bulkley, and repeated in substance the remarks that he had previously made, and which are recorded in the minutes of the December meeting, at which Dr. B. was not present.

## PART SECOND.

### CRITICAL ANALYSIS.

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ART. IX.—*Pathological and Clinical Observations Respecting Morbid Conditions of the Stomach.* By C. HANDFIELD JONES, M.B., etc., etc. London, John Churchill, pp. 225.

As the volume before us is not likely to be reprinted in this country, an abstract of its contents may interest those who note the efforts made to advance our knowledge of this important class of diseases. Such a work, from so well-known a pathologist, must command that respectful attention due to the careful observer at the bed-side and dead house. The principal facts were published in the *Transactions of the Medico-Chirurgical Society*, and are intended to be so presented in this book, as to interest the beginner as well as the proficient. Still, as we must now read while we run, it is to be regretted that reference to the contents had not been facilitated by a better arrangement of the captions or headings of the pages, for, however sound the matter, the style is so condensed and unrelieved as to demand every aid from the printer.

The author must not be held responsible for the manner in which the fine illustrations accompanying the work are disposed; for instance, those displaying the healthy structure of the stomach, are placed midway in the second of the four pages devoted to the subject, and then surrounded with drawings of patches of inflammation, fatty degeneration, and congestion, in an embarrassing manner to the student of these microscopic appearances.

The book is divided into four chapters, with a short appendix and index:—

|                                             |        |
|---------------------------------------------|--------|
| Chapter I.—Anatomical Description, . . . .  | page 1 |
| “ II.—Physiology, . . . .                   | “ 25   |
| “ III.—Pathology—Morbid Conditions, . . . . | “ 56   |
| “ IV.—Clinical Observations, . . . .        | “ 171  |
| Appendix, . . . .                           | “ 222  |
| Index, . . . .                              | “ 225  |

*Chapter I.*—The feature of this book is the endeavor to trace the relations between diseased and microscopic change in structure. A thin vertical section from the stomach of an animal recently killed, viewed by a power of 40.60 diameters, presents the following appearances proceeding from above downwards.

“First, there is a layer which is more translucent than that below, extending through about one-fifth of the vertical diameter of the mucous membrane. This is so arranged as to form folds and laminae, which



include spaces, and presents a rather irregular, wavy upper margin. The laminae are marked by minute striæ, vertical to the surface on which they are set. This layer passes rather gradually into that below. It is the columnar epithelium, which after a short time falls off, and leaves bare the basement membrane on which it rested.

The individual particles are elongated, and contain an oval nucleus in their interior; their free extremity is flat, their attached often pointed. They adhere to each other by their sides, and often form large flakes by thus remaining after they have been detached from the basement membrane. These particles are continued downward a little way, as a tubular lining to the commencement of the follicles, and seem to change rather gradually into the cell-growth which occupies the tubes. These tubes extend downward in a tolerably straight direction to a layer of condensed fibrous tissue which may be termed the corium on which their blind ends rest; \* \* \* \* \* from the corium there passes off a very delicate atmosphere of fibrous tissue, which ascends upwards among the tubes, but is more distinct about their bases. This inter-tubular fibrous tissue seems to be most abundant in the pyloric region. If the blood vessels are congested, or filled with artificial injection, their branches may be well seen passing vertically upwards to open into a plexus of unusually capacious capillaries, encircling the orifices of the follicles, just beneath the basement membrane of the surface. The tubes are surrounded in their whole length by delicate straight vertical capillaries connected by cross branches, so as to form a plexus with elongated meshes. \* \* \* \* Below the corium, we come, lastly, to a small quantity of adhering sub-mucous areolar tissue which invariably contains fat cells, sometimes in large quantity. It is traversed by branches of vessels and sympathetic nerve-bands. \* \* \*

The nerves may be traced as far as the bases of the tubes. \* \* \* In structure the tubes consist of an homogeneous membrane inclosing an abundant cell-growth. This membrane is continuous with that which invests the free substance of the mucous tissue, and may be regarded as an involution of it. \* \* \* \* The cell-growth contained in the tubes consists of large well-formed cells, varying from  $\frac{1}{1000}$  to  $\frac{1}{2000}$  inch in diameter, with celloid particles, free nuclei, and granular and oily matter. The large cells contain a distinct nucleus, lying in a quantity of soft granulous substance, very often imbedding oil molecules in varying numbers. \* \* I do not think the formation of perfect cells is at all essential to the healthy and efficient condition of the gastric glandular epithelium. \* \* It appears to me as it does to Kölliker, that the tubes are generally filled with their epithelium, \* \* the epithelium lining the pyloric tubes is more made up of perfect cell-particles, and is more disposed as a lining to the tube, leaving in its interior a central canal. \* \* \* \* \* The solitary glands being essentially extra-tubular formations, their increase must take place at the expense of the true secreting structure, and must, therefore, be prejudicial to the efficiency of the organ, if it proceed to any great extent. \* \* \* In vertical sections of the gastric mucous membrane in the human subject, where the columnar epithelium is constantly found detached, and the basement membrane exposed, there are not uncom-

monly found papillar eminences of varying length standing up from the surface vertically."

Our author distinguishes these from the true villi by pressure; which, by forcing on the contents of the tubes, shows that these eminences are really masses of altered epithelium protruding from the follicles. He says further on:—

"Whatever may be the condition of the epithelium in the deeper parts of the tubes, that which protrudes from the follicles, or is just ready to protrude, always consists of an uniform, coherent, granulous mass, the cells having become fused down into this state."

*Chapter II.*—Our author has twice repeated the experiments of Bidder and Schmidt on the digestive power of the intestinal secretion, and in both instances obtained corroborative results. He gives the details of the second. A half grown kitten was put under the influence of chloroform, and then the abdomen opened, and an incision made into the duodenum. A piece of lightly roasted mutton, included in a muslin bag, weighing together  $20\frac{3}{4}$  grains, was placed in the lower part of the duodenum, and retained in place by a ligature between it and the incision, while a second ligature was applied to the upper part of the duodenum, just below the opening of the duct from the liver. Another piece of meat in a similar bag, and of exactly the same weight, was placed in the peritoneal cavity; intestine then replaced, and wound stitched. Kitten lived several hours, and found dead next morning. The bag in the intestine had lost fully one half its weight; the other had only lost three grains. Moreover, the piece in the duodenum showed much less of fibre under the microscope, and the remaining fibres much softer than those which had been in the serous cavity; the former broken down by pressure into an amorphous substance, the latter very little altered.

*Chapter III.*—is thus subdivided: 1. Passive Congestion. 2. Inflammation. 3. Hypertrophy and Atrophy of the Solitary Glands. 4. Atrophy of the Glandular Tubes, with varying amount of Fibroid Formation. 5. Mammilation. 6. Ulceration. 7. Changes in Epithelial Contents of the Tubes. 8. Softening of the Stomach. 9. Fibroid Thickening of Tissues subjacent to Mucous Membrane. 10. Cancerous Disease.

1. This is illustrated by the details of six cases of post mortem observations, the first five showing the cause to have been obstruction to the onward current of the blood, and the last being referable to simple atony of the vessels. In the collection of his observations, the author acknowledges his great indebtedness to the admirable post mortem records kept at St. George's and St. Mary's Hospitals. In Case No. 1, on laying the cavity of the stomach open, "the whole mucous surface was found of a dark deep blackish red, which soon became brightened by exposure to the air. The cavity was quite empty and contracted, the mucous membrane thrown into deep rugæ, beneath which there lay a small quantity of alkaline fluid mucus; this consisted of columnar and tubular epithelium. There was no mucus whatever covering the rugæ. In vertical sections the glandular tubes of the splenic, mid, and pyloric regions were found quite healthy, and

there was no interstitial exudation. The whole of the vessels were, however, thoroughly filled with blood; not only the larger vessels surrounding the orifices of the tubes on the surface, but also the long delicate capillaries running between and parallel to the tubes, and the straight vertical veins into which the capillaries open. At the surface, there were numerous spots of commencing extravasation of blood, which appeared to extend for a little depth below the basement membrane, but had not ruptured its texture (vide Fig. 30). More extreme congestion than existed in this case cannot be conceived. The absence of exudation in the gastric tissue, the fluid state of the blood, the dilatation and hypertrophy of the heart, the compression of one lung, and the extravasation into the other, the enlarged and cirrhotic condition of the liver—all make it certain that the extreme repletion of the vessels was from obstruction to the onward current of the blood, and not from active determination to the stomach; the alkalinity of the mucus probably depended on the exudation of some serum from the blood vessels."

In another case, the congestion was apparently of long standing, from disease of the heart, lungs, and liver, giving rise to disintegration of the tubes, from impaired nutrition, and causing "the production of pigment, as the hæmatine frequently exuded from the gorged capillaries, and underwent its usual change."

The following is the note of the condition of the stomach: "Surface of stomach, in splenic and mid regions, was very dark, almost black in spots; rugæ but feebly marked. Splenic region—tubes almost utterly broken up, and reduced to a mass of nuclei and granular globules, mingled throughout with black pigment globules. This change seemed to be a simple disintegration; there was no nuclear or fibroid formation, the tubular tissue was simply broken up, and loaded with black pigment. Mid region—tubes in a very great degree broken up, and their place occupied by different nuclei and cell stuff, with pigment. No nuclear deposits were seen; the basement membrane of the surface was very distinct, in both splenic and mid regions. Pyloric region—the villi were beautifully distinct, with their covering of basement membrane; but the tubes were utterly obscured, if not destroyed, by circumscribed and diffused nuclear deposits. There was no pigment in this part, etc."

We hope soon to see the day when the notes of a post-mortem examination of the stomach will no longer state, "much congested," or "apparently congested," while the simple fact remains that all appearances of congestion, to the unaided eye, may be of cadaveric origin.

2. Dr. Jones recognizes the existence of inflammation under two types—catarrhal inflammation, and gastritis,—intending by the latter term to describe an inflamed condition of the whole substance of the mucous membrane, not of the surface merely. "The anatomical characters of the former are distension of the capillaries, especially of the surface with blood and secretion, often very abundant, of an extremely tenacious, clear, or whitish, or bile, or blood-tinged mucus \* \* The mid, or pyloric, regions are the parts principally affected by catarrhal inflammation \* \* that the pyloric region is an especial



locus of catarrh is partly explained by the nature of its follicles \* \* which approach much nearer to simple mucous follicles. But when the mid region is also covered entirely, or in part, with abdominal mucus, it is manifest that a great change must have taken place in the action of its tubes, debasing their epithelial contents more or less from their function of furnishing the essential digestive principle, to that of heaping up an useless and inert, if not mischievous, product." Still, in the great majority of Dr. Jones' cases, there was no organic change to any considerable extent in the glandular structure of the stomach, so that it seems pretty well ascertained that after attacks of catarrh, the organ may regain all its integrity and functional power. Acute idiopathic gastritis has not been met with by our author, who introduces a case of Andral's, and the results of two experiments, with arsenic on cats. Two cases are given, in one of which the weakened stomach was inflamed by the irritation of a neighboring cancerous growth; the other from an enormous quantity of sub-peritoneal serofulous deposit. In the former, inflammation had chiefly affected the solitary glands.

3. The chief results of our author, in relation to hypertrophy of the solitary glands, or "nuclear masses," as he prefers to call them, may be thus recapitulated:

(a) "It is of the nature of an interstitial growth, spreading among the proper elements of the tissue, and inducing their atrophy. (b) It is generally combined with more or less of fibroid stroma, which in allied instances comes to predominate. (c) Its formation is gradual and latent, announced by no symptoms that have as yet been detected. (d) Age certainly seems to favor its development. \* \* (e) It is impossible not to notice its resemblance to certain changes, \* \* \* consisting most essentially in interstitial fibroid formation, with wasting of the natural tissue. \* \* \* Cirrhosis, etc., are typical instances of this kind, and Bright's disease is, in my opinion, of the same family. (f) \* \* \* As a fibrous or sarcomatous tumor springs up in a certain locality, we know not how or why, so I believe do these low-organized growths develop themselves under invisible influences, of which one probably is the failing assimilative power of the normal tissue." The gradual nature of the change, the compensatory digestive efforts of the intestines, and the diminished sensibility to irritants of less highly organized viscus are believed by our author to account for the lack of symptoms of the change.

4. In this class of cases great destruction of the tubes of the mucous membrane occurs, replaced for the most part by a fibroid or granular matter, attributed by the author rather to depraved nutrition than to inflammation. The following extract gives an idea of these alterations—the patient died from exhaustion, with extreme anæmia. "Stomach: the mucous membrane was generally pale, but tinged yellow by bile, with a few vascular arborizations here and there. Two portions of the mucous membrane were examined and found gravely altered. In vertical sections no trace of the tubes was to be seen. The basement membrane still existed in some parts, in others it was lost; beneath it was a layer of fibroid tissue, containing at its lower part numerous fat vesicles. After the addition of acetic acid some

remnants of the tubes were brought into view imbedded in an indistinctly nucleated fibroid stuff. One of these appeared as an imperfect tube slightly bulged at its lower part; another as an oval cyst with a short truncated neck; another as a spherical cyst, containing some granulous matter and oil molecules. The tube and oval cyst contained only an indistinct granulous or granulo-fibrous matter."

5. Dr. Jones' observations have led him to believe that contraction of the muscular coat has nothing whatever to do with the production of mammillation. It throws the mucous membrane into folds, but does nothing more. He is also satisfied from experiment that the appearance may be easily produced in healthy gastric mucous membrane; and believes "that the organic change which takes place in marked morbid mammillation is an atrophic, and not the opposite, even in appearance. The diseased part is manifestly thinned and not thickened, and it is the shrinking in of this part which leaves the more healthy, prominent, and forming mammillations."

6. The details of eight post-mortem examinations are given of this interesting lesion, performed in the same thorough manner as the others which we have noticed. The ulcers were found in only two instances in the stomachs of females, and none of the subjects were under 48 years of age. In one case, "the ulcers occupied an unusual locality, being situate on the confines of the splenic region, instead of in the pyloric. In four of the eight cases, the mucous membrane of the stomach was found by microscopic examination (*the only sure test*) to be quite healthy in structure. In two the greater part was tolerably healthy, the pyloric region only, as is so commonly the case, being the seat of interstitial fibroid formation; and in two the mid and pyloric regions were considerably diseased. From this, it is sufficiently clear that general degeneration of the mucous membrane, spoiling and wasting of its tubes, contributes nothing, in the way of casual agency, to the ulcerative process \* \* there remains only one case in which there was not some tolerably sure indication of general or local failure of vital powers in other parts besides the stomach \* \* The ulcerative process in the stomach seems to me to resemble very strongly that which takes place in the cornea, in cases of deficient general power. There is manifestly an arrest of the normal assimilative action, the natural tissue is not nourished, but deliquesces, and is absorbed, or flows off. The more clean cut and level the edges, the less is there any reparative effort. Raising and tumefaction of the margins in the mucous membrane—which is free to move—and opacity from deposition of plasma in the transparent cornea, are the evidences of repair having commenced." In one case, "adhesions existed around the upper and left portions of the stomach, uniting it to the left lobe of the liver, to the spleen, to the diaphragm and to the commencement of the descending colon. These adhesions were evidently caused by an old ulcer of the stomach, as shown by a long and puckered cicatrix passing transversely across the cavity, and contracting it in an hour-glass fashion"—certainly an encouraging result. A very interesting case is given of a man aged 82, who died from perforating ulcer,

through the "anterior surface of the stomach, near the pylorus. The perforation externally is circular, with sharp, clean, well-defined edges, seven-sixteenths of an inch in diameter. It lies one inch to the left of the pylorus, and three-quarters of an inch below the large curvature \* \* Several vessels were found in the base of the ulcer, safely sealed up, and no hæmorrhage from the stomach ever occurred." This man had suffered from "heart-burn" for the last thirty years, for which he had been obliged to carry magnesia about his person. It does not appear that he had ever vomited. His chief symptom was burning, deep-seated pain behind the sternum, which became very severe when the stomach was distended. There was but little trace of degenerative disease in other organs, and the stomach in particular was unusually healthy.

7. (a) Fatty degenerations; (b) simple wasting; (c) black discoloration. (a) "It is not unfrequent on examining the mucous surface of the stomach, to find a patch of variable size, as large, perhaps, as the palm of one's hand, of a dull, dead, white aspect, contrasting very much with the surrounding grayish tint of the healthy membrane. The white color of the patches depends on fatty degeneration of the epithelium of the tubes. \* \* \* There seems some reason for considering the fatty change in the glandular structure of the stomach to be akin to, and sometimes concurrent with, the fatty change in the liver. It is quite clear that it is not an indication of gastritis. The occurrence of much oily matter in the epithelium of the lower part of the tubes is not to be regarded as a morbid state. A fatty state of the epithelium is often observed also under other circumstances, especially on the pyloric region. When the upper parts of the tubes become more or less completely obliterated, and the lower are thrown together into groups, the epithelial contents of these parts become remarkably opaque and fatty. \* \* (b) Simple wasting shows itself generally not so much by manifest diminution of the quantity contained in them as by alteration of its particles. \* \* \* (c) Black discoloration of the epithelium depends upon the presence of pigmentary matter in the form of various sized grains or granules within the tubes. These are accumulated in greatest number in the lower blind ends of the tubes. Interstitial deposit of the pigment may co-exist with this state or be absent. \* \* \* Three degrees of energy in the nutrition of the epithelium seem to be marked by the situation of the black matter; the lowest is that in which the pigment is deposited solely between the tubes or indeed mingled with their debris; the next is that where the pigment lies at least partly within the tubes mingled with the epithelium, and perhaps replacing it to some extent; and the third is marked by the presence of the pigment actually in the interior of the cells. \* \* \* I believe them (fatty degeneration and wasting) to be simply examples of mal-nutrition. With regard to black discoloration, I think the evidence is very strong that hyperæmia is essentially concerned in it, at least in most cases; but at the same time where there is no inter-tubular exudation, and the tissue retains its normal structure, I should look on the occurrence rather as an instance in which the normal nutritive action had been modified by a perturbing cause, viz.: the exuda-



tion of hæmatine containing fluid, rather than as an indication of actual inflammation."

8. (a) "There are two forms of softening, one the commonest by far, which is simply the result of the action of the acid contents of the stomach on its own dead tissue; the other, the consequence of a peculiar change taking place in its glandular structure, which generates a powerful acid on the spot, corroding and destroying itself and the tissues beneath. (b) The latter form may occur either with an empty or full state of the blood-vessels of the stomach, the softened part of which will be either quite pale, or of a dark blackish tint. (c) This same form occurs in a great variety of morbid states, which seem to have only this in common—that they are attended with great depression of the vital power. (d) It is more common in children than in adults, on account of their greater delicacy, and less resisting power of their systems. (e) The parts of the mucous membrane undestroyed show no deviation from their healthy structure."

9. "There is nothing very distinctive in the symptoms which are produced by thickening of the walls of the stomach \* \* the discovery of a tumor will be the chief. \* \* Dr. Hare observed that over the greater part of the resisting man, though not over the whole of it, there was some resonance on percussion. \* \* Emaciation marked in all Dr. Bennett's cases, and in Dr. Hare's."

10. "In none of the cases did the cancerous growth itself consist of cells or corpuscles, that could have been declared positively to have belonged to a malignant tumor \* \* in the last case only there were cells in the submucous tissue, which differed decidedly from normal formation. \* \* These facts, as well as several others, seem to me strongly to intimate the little value that can be attached to any structural character, in considering the essential nature of cancerous disease. \* \* That which we can see is the least important; the invisible dynamic qualities are those which should chiefly engage our attention, as sound pathological inquirers."

*Clinical Observations*—Twenty-three in number, the first ten illustrative of disorders classed under the name of "gastric catarrh." wish the reader to think not so much of dyspepsia, whether atonic, inflammatory, or irritative, but of a state of the mucous membrane conveniently expressed under the term catarrh, passing through all the stages, and presenting all the varieties which it does in other situations. \* \* In its early stage, and in its exacerbations, it constitutes a large portion of the cases in which hyperæmia, or inflammation, is a prominent feature. In its later and less active stages it swells the class of those in which the secretion is more or less manifestly morbid. It appears to have for its opposite the common condition of nuclear interstitial formation, which proceeds so latently. \* \* Exciting causes \* \* all which in any way irritate the mucous membrane: indigestible food, stimulants in excess, atmospheric poison of catarrh, or that of syphilis, or rheumatism. Anatomical signs—congestion; secretion of viscid mucus, in varying quantity, and diminution or arrest of the healthy acid secretion. Blood may blacken the matters vomited; sarcinæ may form in the mucus which covers the surface, and lie there

without symptoms. In the acute period: tenderness at the epigastrium, pain referred to lower part of sternum, left side, or between shoulders, increased by food, sometimes notably by hot things. \* \* Later period: pain, aching, or a low sinking feeling, or a sense of uneasiness; \* \* irritability, sometimes so great as to find relief in vomiting alone \* \* tongue gives no absolutely certain indication \* \* thirst varies \* \* appetite differs—craving with irritation—rather deficient where there is much pain after taking food, and very much so when the membrane may be presumed to be in a relaxed atonic state \* \* Irritation to be met by sedatives \* \* water-brash, unattended by pyrexia, by astringents freely and without fear \* \* a peptic tonic sometimes given, to assist the weak organ in its labor. Three cases of probable ulceration are given, treated in nearly the same way, with marked improvement in all. The Dr.'s treatment is based on his views of the pathology of the disease, and is of an analeptic and tonic character, with the exhibition of nitric acid or tannic acid, and attaching more value to the observance of sufficiently long intervals between meal and meal, the exhibition of a peptic tonic (as lactic acid), and the improvement of the general health, than to the administration of ingesta, which may be supposed to be less irritating than others. \* \* \* In a case of sub-acute gastritis, the Dr. derived great benefit from pushing mercury to salivation.

The space which we have occupied prevents us from detailing more of the clinical observations, and limits this notice to an abstract, rather than review. While it is a work temptingly open to criticism, there is yet a vigor and healthful professional tone in all its pages, delightful in these days of book-compiling for the advertisement of the author.

With the opportunities enjoyed by Dr. Jones, and his well-established habits of careful observation, we may confidently look to him for advance in this valuable field of research.

Meanwhile we trust that the careful manner in which his microscopic examinations of this organ have been made will attract renewed attention to the subject; for, be it remembered, the microscope alone can detect most if not all of these pathological conditions.

G. T. E., JR.

## PART THIRD.

### MEDICAL RETROSPECT.

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*Removal of a Uterine Tumor, together with extirpation of the entire organ and its appendages.* By WM. J. BAKER, M.D., KNOXVILLE, Tennessee.—A negress, married, but childless, has been occasionally under treatment since 1851, for inflammation of os uteri. Has always suffered from dysmenorrhœa, and has once been pregnant, but aborted within two months.

In October, 1855, felt a lump in right iliac region. In June, 1856, Dr. B. was called for symptoms of dysmenorrhœa and hysteria, with retention of urine. The abdominal tumor was then found to occupy all the hypogastric region and a portion of both iliacs, inclining decidedly to the right. Firm to the feel, somewhat movable, and reaching to within two and a half inches below the umbilicus. Examination per vaginam reveals a slightly nodulated surface, far back, between the promontory of the sacrum and the uterus; womb pushed forward, evidently retroverted; os high up behind the pubis; speculum cannot display the os, but all visible tissue apparently healthy. From this time until August she remained under treatment, with great suffering at the menstrual periods, and then constipation and inflammation of the rectum were added to her symptoms; and on the 13th of November removal of the tumor was decided upon.

Pain was then constant and excruciating; general health greatly impaired. The tumor resembles in size the gravid uterus at the seventh month. A well-marked protuberance in the right lumbar region, which can be moved as far as the mesian line, a distance of two and a half inches. To the touch the womb feels heavy, and offers some elastic resistance; surface irregular; sound can be introduced with difficulty to the depth of two inches. Mammæ enlarged; areolæ increased in depth and color, with secretion of milk. Depraved appetite and longings. Insists that she has felt motion as of fœtus in utero. Tumor certainly attached to the womb, but whether primarily or secondarily, could not be determined.

Patient anæsthetized with chloric ether, for which chloroform was substituted in consequence of the tardy action of the first agent. When insensible, an incision was made from the umbilicus to the pubes, through the linea alba; when the middle portion had been divided, the tumor protruded. On attempting to lift it, it was found necessary to extend the incision one inch and a half higher, avoiding the navel; the upper portion of the tumor could now be raised, and by turning out the bowels it was found to be attached to the sacral and lumbar verte-



bral regions, by pretty firm and extensive adhesion; it was also found that the uterus and ovaries were so involved that separation was impossible; indeed, the uterine walls "were hypertrophied and distorted, had become heterologous and a portion of the tumor. The ovaries were involved only from contiguity, the peritoneal covering adhering."

It was determined to excise the whole. The serous adhesions were torn or dissected up, the ligaments severed until the mass was attached only by the vagina as a pedicle; a needle, armed with a ligature, was now passed through the cervix, and the lateral halves tightly constricted; the cervix was divided immediately above the ligature, and the mass removed; the pedicle was brought to the lowest part of the incision and secured. Wound closed by the interrupted suture.

There was probably left of the cervix, from the os to the ligature, half-an-inch, section being made just above the junction of the vaginal walls to the neck. But one artery required ligation, viz.: left ovarian, when the broad ligament was cut. Venous hæmorrhage amounted to about 3x. Tumor and parts excised weighed forty-six ounces, avoirdupois; its nature apparently fibrous, but a microscopical examination promised. Treatment by opium to narcotism, commenced as soon as the patient had come from the influence of the chloroform.

November 25.—Sutures removed, wound healing nicely.

November 29.—Pedicle ligatures come away.

December 3 and 4.—The days for her menstrual flow; marked aggravation of symptoms. Condition strikingly similar to that presented antecedent to, and during menstruation. There continued a free discharge of pus from the point where the pedicle was attached; and on Dec. 20, a string of dead areolar tissue was removed, measuring four and a half inches.

January 3.—Free from uneasiness; wound almost entirely healed; discharge slight; sits up, but not allowed to walk farther than from the bed to the arm-chair. She was to-day discharged.—*Southern Journal of Med. & Phys. Sci. (January.)*

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*Case of Gastrotomy.*—Dr. JNO. H. BAYNE, of Prince George Co., Maryland, reports a successful case of Gastrotomy in a robust servant woman, 25 years of age, in labor with her fourth child. Her pelvis was evidently contracted, and her labors had been lingering from this cause. She had now been in labor for two days, and Dr. B. was sent for, and told that the patient had experienced some hours before an excruciating pain in the epigastrium, accompanied with a peculiar tearing sensation; followed by entire cessation of pain, and expulsive uterine efforts; pulse 130, dyspnœa and prostration; os uteri fully dilated, vertex presenting, and high up. She soon became comatose, with great tendency to collapse. Head of fœtus seemed to be rapidly receding, and in a very short time the entire contents of the uterus escaped into the peritoneal cavity; child, then felt distinctly through abdominal parietes, so high up as to interfere with the action of the diaphragm; vaginal examinations now recognized laceration through the fundus. The Dr. selected the operation of gastrotomy, and per-

formed it promptly without an anæsthetic. He divided the parietes from the umbilicus to near the the pubes through the linea alba down to the peritoneum. This was cautiously opened, when a quart of sero-sanguinolent fluid gushed out. No hæmorrhage, but a large fœtus which was removed with great dispatch. No particular allusion to the placenta made. Wound united with interrupted sutures, and complete cicatrization took place in twelve days, notwithstanding symptoms of sharp peritonitis. For several weeks, a dark, grumous, purulent, offensive discharge flowed from the vagina, unaccompanied by constitutional disturbance.

In two months time she resumed her duties as cook.—*Am. Jour. of Med., Sci. (January.)*

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*Rupture of the Uterus.*—Dr. C. M. REYNOLDS of Stateburg, S. C., gives the particulars of a case of Ruptured Uterus, with post mortem appearances:—A negress in labor with twins, (third confinement). First child (footling) born at ten A.M., after a rather tedious and painful labor of eighteen hours, when she complained of acute lancinating pain, of a fixed character, just above the symphysis pubis. At seven, P.M., the Dr. arrived and found one hand and fore-arm in the vagina, and felt the "anterior portion of the vertex" resting on the brim of the pelvis. The head retroceded on the slightest pressure. General symptoms were those of "great restlessness, countenance expressive of apprehension and anxiety; pulse rather frequent, and disposed to intermit; and excessive tenderness over the whole abdominal region." Ruptured uterus diagnosed; and no manual or instrumental interference attempted. The patient died, but it is not easy to understand from the paper how long she lived after the Dr.'s visit. She is stated to have died "at seven o'clock in the afternoon;" but it is scarcely to be supposed that she was allowed to live for twenty-four hours unaided, and it is evident from the context that she did not die immediately after the Dr.'s arrival.

*Autopsy.*—Prolonged and forcible escape of air at the point of first incision, and consequent complete subsidence of the excessive distension. On proceeding, the first objects presenting themselves were the fœtus and the placenta; the whole of the former external to the uterus and in the peritoneal cavity.

Uterus found so contracted as to render it difficult to discover the rent until the hand was introduced per vaginam. Rupture in the anterior portion of cervix, and slightly oblique. Very little blood in peritoneal cavity, and no appearance of hæmorrhage during life. In the contracted state of the uterus the rent was about three inches. Some small amount of coagulated blood in the uterus. All other pelvic and abdominal viscera healthy. The Dr. thinks that he must have unconsciously passed his finger through the laceration, when he recognized the head. Pelvis not examined.—*Charleston Med. Jour. and Review. (January.)*

*American Medical Association.*—The tenth meeting of the association will be held at Nashville, Tenn., on Tuesday, May 5, 1857. All bodies entitled to representation in the association will very much further and facilitate its affairs by sending lists of their representatives at an early period to DR. ROBERT C. FOSTER, *Secretary of the Amer. Medical Association*, Nashville, Tenn.

At the last annual meeting held at Detroit, the following resolution was passed:—*Resolved*, That any new medical institution not heretofore represented in this body be required to transmit to the Secretary, with credentials of its delegates, evidence of its existence, capacity, and good standing.

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*New York Academy of Medicine.*—At the annual meeting of the academy on the 7th of January last, the following officers were elected for the ensuing year:—

*For President*—DR. VALENTINE MOTT.

*For Vice-Presidents*—Drs. J. R. Wood, Beadle, Barker, and Wilson.

*For Recording Secretary*—Dr. C. F. Heywood.

*For Assistant Secretary*—Dr. F. U. Johnston, Jr.

*For Domestic Corresponding Secretary*—Dr. Hubbard.

*For Foreign Corresponding Secretary*—Dr. J. W. Green.

*For Treasurer*—Dr. J. O. Pond.

*For Librarian*—Dr. T. F. Cock.

*For Trustees*—Drs. Kissam, Blakeman, Anderson, Griscom, S. P. White, Carter, and Ogden.

*For Orator*—Dr. J. Marion Sims.

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*New York State Medical Society.*—The annual meeting of this society was held at Albany on the 3rd of February. The meeting, we learn, was one of unusual interest, being the semi-centennial anniversary.

The following officers were elected for the ensuing year:—

*For President*—DR. AUGUSTUS WILLARD, of Chenango.

*For Vice-President*—Dr. Thos. C. Brinsmade, of Rensselaer.

*For Secretary*—Dr. Sylvester D. Willard, of Albany.

*For Treasurer*—Dr. John V. P. Quackenbush, of Albany.

Drs. John Ralph, of Montreal, and Henry J. Hunter, of London, were elected honorary members of the society.

An elegant entertainment took place at the Delavan House.

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*New York Pathological Society.*—At the annual meeting of this society, the following officers were elected for the year 1857:—

*For President*—DR. JAMES R. WOOD.

*For Vice-Presidents*—Drs. Clark and Bolton.

*For Secretary*—Dr. E. Lee Jones.

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 *To Readers.*—The unexpected length of articles in the original and hospital departments of this number has crowded out our usual variety of retrospect.



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# THE NEW-YORK JOURNAL OF MEDICINE

FOR MAY, 1857.

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PART FIRST.

ORIGINAL COMMUNICATIONS.

ART. I.—*Case of Disarticulation and Removal of nearly the Lateral half of the Lower Jaw.* By C. E. ISAACS, M.D., Demonstrator of Anatomy in the University of New York. [With three Illustrations.]

MR. B., a merchant of this city, residing in Brooklyn, æt. 32 years; of good constitution; in June, 1851, began to complain of some slight pain and uneasiness in the region of the jaw, near the wisdom tooth of the right side, which had not yet made its appearance. In October, 1852, the gum over it was lanced by a dentist, for the first time. During the year 1853, this operation was repeated several times. In December, 1853, it was freely incised by Dr. Bell, of Brooklyn, and some matter was discharged. In October, 1854, Dr. Bell removed a portion of the gum, from over the tooth. During the fall of 1854, he had frequent hæmorrhage from the part, until December of the same year. Dr. Kissam and Dr. Bell then removed a large portion of the surrounding parts, with the wisdom tooth, which was found lying crosswise, and out of its socket. In January, 1855, a fungous mass, was perceived, to which the nitrate of silver was several times applied, and upon one occasion the actual cautery was used. In March, Mr. B. consulted Dr. N. R. Smith, the distinguished Professor of Surgery, in Baltimore. He was under his care for about two months.

As the patient resided in Brooklyn, on his return home,

Dr. Smith was so kind as to place him under my charge, explaining to me, at the same time, his opinion that the disease was probably of a malignant character. I first saw the patient in the early part of June, 1855, and found, on examination, a fungous mass protruding from the jaw, in the situation formerly occupied by the molar teeth. Observing this carefully for several days, I could not resist the conviction that it was cancerous. I removed a small portion with the scissors, and, placing it under the microscope, found in it abundance of cancerous cells.

FIG. 1.



Appearance of the cancerous mass on the outer surface of the jaw.

I then introduced the patient to Professor Van Buren, without expressing any opinion to him as to its nature; he was decidedly of opinion that it was malignant, and that the removal of the jaw was the only chance for the safety of the patient; Dr. Gurdon Buck, who saw the case a few days afterwards, was of the same opinion. Accordingly, I proceeded to operate on the 10th of June, 1855. There were present Drs. Van Buren, Buck, Markoe, Elliot, Gouley, Bell, Catlin of Youngstown, Niagara Co., N. Y. and Lorette,

of Williamsburg. My friend Dr. George T. Elliot placed the patient under the influence of chloroform, which produced the happiest effect; the patient remaining insensible during the whole of the operation. I made a semilunar incision, commencing a little below the articulation of the lower jaw, and extending downwards along the posterior border of the ramus, and under and along the base of the jaw, following its curve until it reached a point opposite the canine tooth.

FIG. 2.



Appearance of the cancerous mass on the inner surface of the jaw.—A, cancerous materia protruding from a button-like shell of bone.

In this incision, the branches of the portio dura were necessarily divided; the facial artery was secured between two ligatures, and then divided. The masseter muscle and soft parts were dissected up, so as to form a flap, which was turned upwards from the bone, and over the face; the knife was then carried close along the inside of the bone, so as to divide the attachment of the mylo-hyoideus

and the mucous membrane of the mouth at a point opposite the first bicuspid tooth, which was then extracted. By the assistance of Drs. Buck and Van Buren, the chain saw was passed around the jaw at this point, and the bone was here divided. The attachment of the internal pterygoid muscle was divided close to the bone; the dental artery and nerve; by depressing the bone, the insertion of the temporal muscle into the coronoid process was separated; then the attachment of the external pterygoid to the neck of the lower jaw. The capsule was next opened on its external surface; then, by carrying the knife behind the capsule, it, with the remaining parts, was entirely divided, and the disarticulation completed. The hæmorrhage was inconsiderable, probably amounting to six or eight ounces of blood.

FIG. 3.



Cells from the interior surface of the Masseter Muscle.

On looking at the internal surface of the masseter muscle, I noticed it had evidently been contaminated by the disease; I therefore removed the whole of it, and also all the accessible portions of the internal and external pterygoid and temporal muscles, as well as all other parts which had a suspicious appearance, so far as it was safe to do so. After arresting the hæmorrhage, and carefully cleaning the surface of the wound, it was brought together by the

interrupted suture, adhesive strips, etc., etc.

I was much assisted in the dressing by my friend Dr. Bell, who was so kind as to take charge of the patient for me after the operation, and to his skillful care and attention I attribute much of its success. I examined the inner surface of the masseter muscle, after the operation, and found it filled with cancer cells; I then cut off a thick slice of the inner surface, and, on examining the remaining portion of the muscle from which the slice had been so removed, found but few cells. On making successive slices, the cells were found less and less numerous, until, on approaching the outer surface of the muscle, no cells could be discovered. The wound, throughout a great portion of its extent, united by first intention, but was not entirely healed until October; no unfavorable symptom having occurred during his convalescence.

For many months there was partial paralysis of the branches of the portio dura which had been divided, in consequence of which the muscles were drawn to the opposite side, and it was difficult to close the eyelids. It is now nearly twenty months since the operation. I have this day seen the patient, who is in excellent health, and has gained in weight several pounds. The appearance of the parts in and about the mouth is perfectly healthy.

The restoration of the function of the divided branches of the portio dura has been so perfect that the eyelids of the right side can be as well closed as those of the left; and it would be difficult to trace any difference in the expression on either side of the face. He has raised a large pair of whiskers, which entirely conceal the cicatrix. Much to my surprise, he told me that he could masticate any kind of food almost as well as before the operation.

I may now allude to the most interesting points in the history of this case:—

1. The extirpation of the jaw without ligature either of the common or external carotid.

2. The restoration of the function of the divided branches of the portio dura.

3. The removal of the masseter muscle, and the tracing of the cancerous deposit from its internal, to its gradual disappearance near its outer surface, thus showing the necessity of complete extirpation of all suspected parts.

4. The fact of the non-recurrence thus far of a disease, which, as viewed both by the naked eye and through the microscope, was undoubtedly of a cancerous character.

ART. II.—*On Metastatic After-Pains*. By E. NÆGGERATH, M.D., of New York.

THOUGH the obstetrical art and science occupy a prominent position among the different branches of medicine, there are very many incidents of a physiological, or a pathological, character, which have not been sufficiently explained up to the present time. The veil is yet to be lifted from most of the nervous disturbances observed during or after confinement. How little do we know, for instance, of a phenomenon called metastatic pains? The only authors who have mentioned this dystocia in their writings, are Herder, Schwartmuller, Wigaud, Stein, jun, Pilger, Loewenhardt, Mende, Dubois, Burns, Churchill, and Power. But the greatest num-

ber of obstetrical authors either do not refer to the subject at all, or deny the existence of such pains. We can only account for this from their being rarely met with. Still, those few writers who have discussed the subject show such a coincidence in the irrespective observations, that an attentive and impartial reader can not but believe that, in some instances, the genuine uterine activity during a labor gives away, and neuralgic pains or muscular contractions in another department set in. The most commonly affected regions are those which lie nearest the uterus, viz., the bladder, the anus, the intestinal tube, the stomach, etc.; and less frequently the extremities, the thorax, and the larynx have been reported as being affected.

The honor of having thrown the greatest light upon this curious phenomenon, is due to Dr. John Power, of London, who has written a thesis on metastatic labor in which he gives a full description of the disease and its cure, illustrated by over thirty cases.

In order to give a correct idea of the so-called metastatic pains, we shall present some observations which will prove more instructive than pages of theoretical expositions.

Among the different cases noted by Dr. Power, we find in Case 8 a marked instance of uterine metastasis upon the bladder:—Mrs. P., at the beginning of the labor, had genuine uterine contractions, which dilated the os uteri with sufficient rapidity, when we remarked that the pains became suddenly more distressing, though they had no longer their former influence upon the mouth of the uterus. Placing our hand upon the fundus uteri during a pain, we could not perceive any contractions at all but the woman complained of a very painful sensation just above the symphysis pubis, which ceased after some time, and came back in regular intervals. Mrs. P. had not evacuated her bladder for a considerable time and was prevented from doing so by the pressure of the head against the symphysis pubis. We considered this a case of metastatic pains in the bladder, produced by an irritation of this organ, arising from its being overloaded with urine, and the vain attempts to empty itself. We, therefore, introduced the catheter, and drew off a considerable quantity of water. This being performed, regular uterine contractions set in, and labor was soon ended in the most satisfactory manner. Prof. Stein gives, among other very interesting cases, one of metastasis to a part of the nervous system, which is quite removed from

the sphere of the uterine nerves. He says, "In this case a great quantity of liquor amnii was present, and, in consequence, the pains were very irregular. Suddenly, all uterine action ceased, and the woman was taken with a violent facial neuralgia. This affection lasted for one hour, when it gave entirely away, and another succession of labor pains set in; these, after some time, ceased, and the prosopalgia commenced, which was exchanged once more for activity of the womb, and so on by turns. At length the membranes were ruptured; after which, regular uterine action began and continued till the child was born.

Another very singular case was observed by the same author. A woman, when at the full term of her confinement, was taken with general convulsions, which ceased suddenly, but continued in the musculus orbicularis of both eyes, so that she could not open them for two days. Now the womb began its work, and with the first contraction her sight was reestablished.

Many of the authors above mentioned, and especially Pilger, observed that, during a confinement, the pains gave away, and the patient was suddenly taken with an alarming dyspnœa, which ceased as soon as another contraction of the uterus commenced. Others witnessed that the abdominal muscles were the seat of metastatic labor. (Power, Herder.)

This kind of dystocia is of rare occurrence. But there is another very severe and most tormenting affection occurring after confinement, which we find mentioned in almost every treatise on midwifery, yet vainly seek for an explanation of the fact. I mean those very painful affections of the lower extremities, which commence a few hours after the child is born, and last sometimes for two or even eight days. The authors who treat of the said affection, call it "*the crural neuralgia of women in childbed*," and believe it to be the result of pressure of the foetal head, or the forceps, or of an inflammatory exudation upon the crural nerves as they pass through the pelvis. I will not deny that this is the case in a few instances. But when these pains follow after an *easy* confinement, where neither a large-sized head, or a forceps operation, or an inflammation of the bowels can be referred to as explaining this symptom, then we have to seek for another explanation.

As I have been so fortunate as to have had several women under my own observation who exhibited this phenomenon, I shall give a minute description of two of these cases, which

are so striking that, after perusing them, no one will doubt that, hereafter, we have to designate what has been called crural neuralgia of childbed, as *metastatic after-pains*.

Case 1.—Mrs. F., æt. 34 years; born in Bonn, Rhenish Prussia; is of a rather small stature, and of a very excitable disposition. Five years ago she was confined for the first time, and everything went on very favorably during and after labor. Two years later she was delivered of another child, the birth of which was followed by a violent pain in the right leg, which lasted, with but short intermissions, for *five days*. On the 31st October, 1856, I was called to this woman who had been the night before confined, I found her in a deplorable condition, continually groaning, and occasionally crying aloud with pain, so that she was unable to give a coherent account of her symptoms. From the midwife who had attended her, I learned the following peculiarities of her confinement:—The labor began at eight o'clock last night, and was completed at half-past ten o'clock P.M. with the birth of a living full-grown child. The pains were regular and very strong. When the placenta was removed, the midwife did not dare to leave the woman, because she felt the womb to be exceedingly soft and uncommonly large; she expected that a hæmorrhage would be the consequence of this uterine relaxation, an opinion which was not confirmed by the ensuing events.

This morning, at about seven o'clock, the right thigh was suddenly seized with a pain, which soon increased to such violence, nay, fury, that the patient was afraid to move the leg the slightest degree from its position. The lower part of the thigh was the seat of the greatest pain, and especially its external surface extending over the *dorsum pedis*. The least pressure could not be endured. After the child was born, the woman had not the slightest perception of after-pains. She felt as if her *abdomen was empty*, or *rather not existing*. The uterus was enormously distended, its limit or outlines being scarcely distinguishable, its texture remarkably soft and relaxed. Considering this to be a case of metastatic after-pains, I thought the chief indication would be to bring on uterine activity, after which the pain in the thigh should disappear. The result of my treatment proved that I was right.

Shortly after ten o'clock I gave her a large tea-spoonful of powdered ergot of rye (*secale cornutum*). Ten minutes past, the patient remarked a discharge of blood from the vagina,

the first after her delivery; a quarter of an hour after the administration of this remedy, the woman became more quiet, she ceased to cry, except occasionally, and a painful expression was noticed in her features. Twenty minutes past ten o'clock she said that the former kind of pain had left her thigh and yielded to a very bearable sensation of smarting. At half-past ten o'clock she took the same quantity of ergot, and fifteen minutes later I had the pleasure to see that the patient moved to lay upon her right side; she could bend her knee and move her leg up and down; she even told me now that she *had not the least pain*. When I left her (before eleven o'clock) I could ascertain that the uterus was well contracted, lessened in size, and considerably harder than when I made the first examination. The woman had no relapse afterwards.

Case 2.—Mrs. T., a small, lean woman, æt. 31 years; born in Bonn, Rheinisch Prussia; was confined five years ago for the first time. After that, she had one other good safe delivery and continued to be healthy in every respect. The labor in, which I attended her began at seven o'clock, A. M., on the 27th April, 1855. The very first pains were not strong, and degenerated by degrees into real atonic pain. At five o'clock, P. M., the membranes ruptured, and a large quantity of water escaped; the fundus uteri, at that time unusually distended, with very thick walls, was located in left side of the abdomen. By internal examination, I found the os uteri in the right cavity of the pelvis, dilated to the size of about three inches. The head of the child stood in the entrance of the pelvis, the triangular fontanel towards the left side, and turned somewhat behind; the temperature and secretion of the vagina very scarce; the pains slow without a real acme, interrupted by long and irregular intervals. I prescribed a solution of borax in an infusion of flor. sambuc., hot bottles near the genitals, moulding of the uterus, and I also directed the woman to be turned on her right side. After this the pains grew stronger, so that, at about nine o'clock, P. M., a medium-size living child was born. After I had removed the placenta, the uterus was sufficiently well contracted. When I left the woman she felt quite well. The following morning I was called to see her; found her crying out with a violent pain in the lower part of her right thigh. Upon my inquiries, I was answered that, at about half-past eleven o'clock last night, she was suddenly awakened by a kind of straining sensation in her leg, which soon increased to such a distressing painfulness that she was

unable to sleep for the rest of the night. Listening to her exclamations, I could easily observe how the painful affection came on slowly, increased gradually, and sunk to a perfect intermission. *She did not feel anything like after-pains*, though she knew this sensation very well from her previous confinements. At eight o'clock in the morning, when she began to nurse her child, the pains, which sometimes affected the left thigh, had somewhat lessened. I could detect no pathological symptom in the affected leg, occasionally I remarked a starting of some muscle, very much like a subsultus tendinum.

But the uterus proved to be very different in form and size from what it was last night, when I left the woman. This organ was much larger, of a more spherical conformation, its texture extremely tender and soft to the touch, so that at first it was scarcely possible to discover its figure through the abdominal walls, though they were thin and collapsed. Its vitality was so much lowered, that hard pressure upon it, which caused much pain last night, was now scarcely perceived. Ordered—

R Secal. cornut., recent. pulverat. ʒib

Infus. C. aqu. fervid. ad cal. ʒjii

Add syrup. zingib. ʒi.

One table-spoonful to be taken every half hour.

When I saw her again, at about six o'clock, P.M., she told me that soon after taking the medicine she felt much relieved, and that at four o'clock, P.M., the pains in her legs had ceased entirely, adding, that she felt them at present more in her back and stomach.

In both these cases especially in the first one, it is obvious how important it was to have a right idea of the disease in order to adopt the proper treatment. While this patient, on a former occasion, suffered for *five days* from her so-called neuralgia, we were able to remove it entirely *in one hour and a half*.

The latter case is very interesting in regard to the course and diagnosis of the disease. The woman exhibited already symptoms of atonia uteri during her actual labor, and this state continued after confinement. The uterus was in a perfect state of rest as regards both its sensitive and motive power. A part of the nervous activity, properly belonging to the uterine system, became free, and consequently was added to the natural amount of nervous tension in some other part; and, in this instance, the nerves going to the right thigh

had to bear its influence. Every one knows that irritation of the mammæ reflects upon the uterus as a stimulus, i. e. brings its nerves into greater activity. Therefore, nursing the child was to rouse the uterine nerves from their inactivity, and this ought to diminish the pains in the leg. This fact was observed in our case as the woman told us herself without even being asked about it.

In explanation of these singular pathological occurrences, we must bear in mind, that there is always present a limited amount of nervous power in the central organs. Therefore, if one part of the body receives a nervous impulse in excess, other organs must be more or less deprived of it; or, when there is prepared in the nervous centers a certain amount of material for the purpose of setting one department of nerves into action, and this department being in itself not properly disposed to receive it, then, another portion of the nerves must attract this amount, and show a greater activity. The same result must happen, when some other part of the system is in such an unnatural condition, that it attracts more nervous force from the centers than is due to it. In this case another organ must lose part of its activity.

These principles applied to the uterine system, we are able to explain the pathology of metastatic pains. When labor begins, the sympathetic nerves and the spinal cord secondarily are called to a physiological energy, which is seen in no other instance of life. Their activity is provoked by the uterus, and in ordinary circumstances directed to the uterus. But in order to perform their duties properly the womb must be sufficiently disposed to attract the nervous fluid to its own sphere. In case of its being in a state of weakness, other organs receive the effect of the overloaded centers, and thus exhibit the phenomenon of metastatic pains. Therefore this complaint is most commonly observed in connection with atonic labor-pains. But if some part or other of the system was previously, or during parturition, in an unhealthy condition, it would be liable to attract to itself the nervous energy originally due to the uterus, even if the latter was in a state of health. Therefore, we see that, in very many instances of metastasis, the affected organs stood under some morbid influence before or during confinement.

I lately was confirmed in these views of metastasis by a case which I observed in this city in September last. Before relating the case it will be necessary to make some explanatory remarks. It can not be doubted that, in the central

organs of a healthy person, there is always sufficient electricity to maintain a medium state of tension in all the nervous cords, both motive and sensitive, going to the different parts of the body. This amount of central irritation is present nearly to its full extent even if one of the more important organs is in a temporary state of greater physiological activity, such as the brain in thinking, the stomach in digesting, the uterus in delivery, etc., etc., but if the above views of disturbances in the nervous equilibrium are correct, it must happen sometimes, when one of these organs, being engaged in physiological action, is in a state of excessive irritability during its work, that the amount of specific central energy, is not sufficient to answer the requirements of the stimulated organ and then another part of the system will be partially deprived of its physiological activity.

This was the case in the following instance. In September last, I assisted a lady of New York in her confinement, which went on so rapidly that labor was nearly completed when I arrived, though I obeyed the call immediately; all I had to do, was to remove the after-birth. This was her sixth confinement, and on nearly all former occasions she had to suffer from most distressing after-pains, she asked my advice in order to be relieved from that complaint. At about two o'clock, P.M., I was called again to see her. She complained especially about her right leg, so that at first I anticipated having another case of metastatic after-pains. In this I was deceived after a closer examination. It was just the reverse. For she suffered, at the same time, from unusually strong after-pains. The uterus was small, contracted, and hard as a stone. In the right leg she had the sensation "*as if it did not belong to herself*;" it felt benumbed and heavy; she had not the power of moving it. When I touched it she was unable to tell at what place exactly this was done. In short, it exhibited appearances which, in all, were most akin to paralysis. I prescribed a few doses of laudanum and ipecac, which relieved her greatly, and as the after-pains gradually subsided, the limb returned to its natural sensation and mobility.

This case related by itself would be a perfect puzzle to everybody. It can only be understood by comparing it with the above narrated cases of metastatic after-pains, and thus it becomes a key to the right explanation of this intensely interesting phenomenon.

ART. III.—*A Critical Examination of the Evidences of the Osseous Union of Intra-Capsular Fractures of the Cervix Femoris.*

By JOHN JOHNSON, M.D., House Surgeon to Bellevue Hospital.

UNTIL within a few years, much diversity of opinion has existed upon this question. Lately, the preponderance of opinion has inclined strongly toward the affirmative. In the conviction, however, that it is an open question, we desire to submit to the profession the results of our investigation of the subject.

The first question which presents itself is—Can intra-capsular fractures be diagnosed with certainty *during the life of the patient*?

Fractures of the cervix femoris present themselves in three varieties:—1. Those entirely within the capsular ligament. 2. Those entirely without the capsular ligament. 3. Those partly within and partly without the capsular ligament.

The subjective symptoms are:—1. Pain. 2. Loss of voluntary motion. The objective symptoms are:—1. Swelling and deformity at the hip. 2. Approximation of the trochanter major to the anterior superior spinous process of the ilium. 3. Shortening. 4. Crepitus. 5. Eversion. 6. Formation of callus. 7. The direction in which the force is applied.

It is hardly necessary to refer to the first of the subjective symptoms as a means of diagnosis, for in all cases of fracture of the cervix femoris, there is more or less injury to and laceration of the soft parts—and, consequently, pain.

It is generally admitted that in all these cases the patient feels pain in the whole vicinity of the joint.

2. Loss of voluntary motion exists in all fractures of the cervix femoris where there is displacement, whether the fracture is within or without the capsule. The only exception is in cases of impacted fractures, where the shaft of the bone is driven into the cancellated portion of the head, in which cases the power of voluntary motion may still remain.

Of the objective signs, the amount of shortening *immediately* attendant on the injury has been insisted upon as the most conclusive in the diagnosis of intra from extra-capsular fractures.

Those that insist that they can distinguish between these kinds of fractures during the life of the patient, maintain that the amount of immediate shortening in the cases of

extra-capsular fractures is so much greater than in intra-capsular fractures, as to furnish conclusive evidence as to which class the fracture belongs. First, they maintain that immediate shortening is greater in extra-capsular fractures, from physiological principles; second, as a matter of experience. The physiological reason is, that the cervix femoris is surrounded by a capsular ligament, which, in health, is extremely powerful, and closely embraces the head and cervix; thereby preventing the shaft from slipping so far in intra as in extra-capsular fractures. If the capsule was in every case uninjured, this would be satisfactory; for it must be admitted that the capsular ligament is very strong, and acts powerfully in retaining the fractured parts in their places. If, however, the capsular ligament is torn, the shaft of the bone may slip through the rent, and thus afford an amount of shortening as great as in cases of fractures entirely without the capsule. All authorities admit that laceration of the capsule may, and often does, occur. Again, if the head of the femur is comminuted, shortening to an indefinite extent may occur. The head of the femur may be comminuted, as this fracture usually occurs in persons past the prime of life, when all the bones are fragile. Further, we can not diagnosticate oblique intra-capsular from transverse extra-capsular fractures, for it is quite impossible to feel the direction of the fracture, imbedded as it is. Again, the shock is sometimes so great as to cause a paralysis of the muscles, and in these cases the shortening does not immediately occur, even though the fracture be extra-capsular. The fracture may also be impacted, and yet extra-capsular. In these cases there will not be as much immediate shortening, as is claimed for all cases of extra-capsular fractures.

From these considerations, we conclude that unless the condition of the capsule, or the precise nature of the fracture can be determined, the amount of shortening is not a diagnostic mark to be relied on.

2. *Opinion of Authorities.*—It is surprising to find the amount of difference among authorities upon this point. The most eminent surgeons, not of this country alone, but English, Irish, and French, hold directly opposite opinions.

Sir Astley Cooper says, that intra-capsular fractures gives the greatest amount of shortening. Mr. Stanley is opposed to him. He states that extra-capsular fractures have the greatest shortening. Amesbury claims the greatest shortening for intra—and Earle, for extra-capsular fractures. Robert

Wm. Smith, of Dublin, claims the greatest shortening for extra-capsular ; while Chassaignac, and Vidal, (de Cassis) are opposed to Desault, Boyer, Dupuytren, and Cloquet.

How can these contradictory opinions be reconciled or harmonized ? Only by considering that, in some instances, the intra-capsular fractures have given the greatest amount of shortening, and in other instances the extra-capsular fractures give the greatest shortening ; and that the surgeons who have seen the cases of the first class, hold the opinion that extra-capsular shortening is the greatest ; while those who have seen cases of the second class, hold the opinion that intra-capsular shortening is the greatest ; accepting this, as the true explanation, and there is none other we can accept without charging either the one side or the other with ignorance or with intention to mislead, (neither of which charges we are willing to make,) we are compelled to conclude that this symptom does not present itself with sufficient regularity to be of weight as a diagnostic sign. This is the opinion entertained by the French Surgeon, M. Rodet, who says :—
 “ Cette opposition formelle entre les opinions de ces grands chirurgiens vient sans doute de ce qu’il n’y a rien de constant dans le degré du raccourcissement, qui accompagne de ces deux espèces des fractures.” With this difficulty, both in theory and in experience, we are compelled to exclude the amount of shortening as diagnostic of the character of the fracture.

Crepitus.—This will depend on two conditions : first, whether there is anything interposed between the ends of the bone, as muscle, capsular ligament, etc., to prevent the rubbing of the ends together ; second, whether there is impaction. If there is no impaction, and nothing interposed between the ends of the bones, there is no reason why crepitus should not occur, whether the fracture is intra or extra-capsular.

Eversion.—This will depend, if the fracture is intra-capsular, much on the amount of laceration of the capsule. If the capsule is lacerated, there is no reason why the foot may not be everted as fully as in cases of extra-capsular fractures. Until it is determined whether there is, or is not, laceration of the capsule, it is certain that we can not make the amount of eversion a diagnostic sign.

Again, if the fracture is extra-capsular and impacted, there may be as little eversion as in cases of intra-capsular fracture, where the capsule is not lacerated. So, whether we

have intra-capsular fracture with laceration of the capsule, or extra-capsular fracture without laceration; whether we have intra-capsular fracture without laceration, or extra-capsular fracture with impaction, we can not form a diagnosis from the eversion.

Callus.—It has been thought that the existence of callus furnished a means of diagnosis, because there would be no callus formed around the ends of the bone, if the fracture was intra-capsular. This is true; there is no callus formed *within* the capsule, but there is a *formation* of callus in cases of intra-capsular fracture. The callus is formed precisely where the law that governs plastic exudations would teach us to look for it, viz.: *external* to the capsule, where there are tissues capable of effusing it. It is effused *external* to the capsule precisely *where* it is effused in cases of *extra-capsular* fracture. This fact is beautifully shown in the specimen of intra-capsular fracture, now in the possession of Dr. William H. Van Buren, of this city. A minute description of which will hereafter be given. The simple formation of callus, therefore, can not be considered a diagnostic sign of extra-capsular fracture, as it may be found in the same place in both kinds of fracture.

Approximation of the Trochanter Major to the Anterior Superior Spinous Process of the Ilium.—This can not be a diagnostic sign, for there will be approximation in *every* case of fracture of the cervix, and the degree of approximation will depend on the direction of the fracture; an oblique fracture giving us more approximation than a transverse; and this rule will hold true, whether it is an intra or extra-capsular fracture.

Swelling and Deformity at the Hip.—This will occur in both cases; the amount of deformity depending on the direction of the fracture.

M. Rodet having come to the conclusion, that none of these signs were diagnostic, rejected them; and maintained that *the direction in which the force was applied* was the only diagnostic sign; and that the fracture will be intra or extra-capsular, oblique or transverse, according as the force has been received in a vertical, lateral, or transverse direction. Mr. Smith thus sums it up:

Force acting vertically,.....	Fracture will be oblique, and intra-capsular.
antero-laterally,....	transverse, and intra-capsular.
postero-laterally,...	mixed.
transversely,.....	extra-capsular.

Thus, if the person fell upon the knees, we should have the first class, oblique and intra-capsular; and in regard to this argument, Mr. Smith, of Dublin, makes the following very just remarks: "With respect to Rodet's diagnostic sign, it will be admitted as a general principal, that the mode of application of the force and the direction in which it acts, will determine the situation and direction of the fracture; but I contend that it is seldom available in practice in determining the seat of a fracture of the neck of the femur with respect to the capsule, for it would be extremely difficult, if not impossible, in the generality of cases, to obtain from patients a description of the direction in which the force was applied, as accurate as would be necessary before we could avail ourselves of it as a means of diagnosis. It is not probable that a person of advanced age, who had just suffered so severe an injury as fracture of the neck of the thigh bone, would be able to inform us whether the shock was sustained by the external surface of the trochanter, or whether there was a deviation anteriorly or posteriorly from a directly lateral fall." (SMITH *on Fractures*, Page 21.) It might be quite impossible to determine the point of injury from an examination of the hip, as it may have been so protected by the clothes, that no ecchymosis occurred, or the contusion and ecchymosis may be so extensive as to lose all value as indications of the precise spot of the application of the force. Mr. Smith also gives an instance (page 21) in which, according to this rule, we should have an extra-capsular fracture, and in which dissection proved that the fracture was intra-capsular. So much for this diagnostic sign, beautiful in theory, but valueless in practice.

I have thus reviewed each of these symptoms of fracture. They are all extremely obscure, and the one upon which the greatest stress has been laid—*shortening*—must be excluded altogether. Taken separately, no one of them will enable us to form a diagnosis; taken collectively, there are so many different conclusions that may justly be deduced from them, that no positive diagnosis can be given between the two kinds of fracture *during the life of the patient*.

If this difficulty attends the diagnosis of the two extreme classes of extra and intra-capsular fractures, still greater difficulty must attend the diagnosis of the third class, which is a mixture of the other two, partly intra and partly extra-capsular; and when we come to diagnose this third class from the other two, it is impossible. As no accurate opinion

can be formed of the precise nature of the injury during the life of the patient, so no conclusion can be drawn as to the osseous or non-osseous union of fractures within the capsule from those patients who recover. This limits the decision of the question to the conclusions derived from an examination of post-mortem specimens.

Before entering on that question, it may not be improper to consider the probability of the osseous union of intra-capsular fractures, in the view of the anatomical and pathological conditions existing. The first point is the effect of the injury on the capsule.

Violence sufficient to fracture the cervix femoris, must be sufficient to cause injury to the synovial membrane of the capsule. The result of that injury will be inflammation of the synovial membrane, and the result of that inflammation will be the effusion of a superabundance of synovial fluid; or, if the inflammation continues long enough, of plastic lymph. Now, when the synovial fluid is poured out, there must be distention of the capsule by it, and if this occurs, then there must be separation of the ends of the bone, for they are attached to the capsule. If the ends of the bone are separated, we can not have osseous union; for even the most ardent advocate of osseous union (R. W. Smith, of Dublin) claims it only in cases of impacted fractures. Now, as long as the inflammatory action continues, so long shall we have synovitis, effusion, distention of the capsule, and consequent separation of the ends of the bone. If the inflammatory action ceases, we shall not have union by bone, for the first thing nature does is to get up an inflammatory action in and around the ends of the bone, whereby plastic exudation is poured out. That we do have synovitis in all cases of intra-capsular fractures is evident from the autopsies, for the capsule is always reported thickened. This thickening is evidently due to inflammation of the synovial membrane, so long continued that not merely synovial fluid had been effused, but plastic lymph, and that lymph had become organized.

2. There is no sufficient means left, after the fracture, to nourish the head of the bone, and furnish material for ossific union. The only possible means of nourishing the head of the bone, are four in number:—1. From the branches of the nutrient artery of the femur. 2. From the periosteum. 3. From the synovial membrane. 4. From the vessels of the ligamentum teres:—1. If the bone

is fractured, the probability is that the branches of the nutrient artery are torn from the head of the femur. 2. The periosteum will probably be torn, because it is the most delicate upon the head and cervix. 3. The synovial membrane would produce synovial fluid and lymph, but not ossific matter. 4. The vessels of the ligamentum teres are so small as to be imperceptible to the unassisted eye, and it is not possible that these should be able to carry a sufficient amount of nutrition to support the bone, and afford ossific union. Grant, for the sake of argument, that the vessels of the ligamentum teres were capable of performing this function. If they did perform it, they would become much enlarged from this increased action, in the same manner that the anastomotic vessels are enlarged in the case of a ligated artery; but in every one of these cases, of so-called osseous union, where the ligamentum teres has been spoken of, it has been described as *natural*. If it was natural, then its vessels could not have performed this increased function. If it was not natural, then the notes have not been *faithfully reported*.

3. Another difficulty in the way of osseous union is to be found in the difficulty of maintaining the ends of the bone in coaptation. Nature's splint does not work here; there is no provisional callus around the ends of the bone to maintain them in apposition. There is effusion into the capsule, so that no external splint can be applied which will be able to control the upper end of the fractured bone; for, if it is firmly applied, the pressure will increase the synovitis; if it is not firmly applied, it is of no use.

We conclude, therefore, that bony union of the intra-capsular fracture does not occur, for the following reasons:

1. The separation of the ends of the bone by the synovitis, which synovitis continues so long as there is inflammatory action in the part. 2. The lack of tissues capable of producing ossific matter. 3. The lack of means of nourishment. 4. The impossibility of retaining the bone in coaptation.

Before leaving this part of the argument, another point must be briefly considered, because some writers lay great stress upon it. It is the "Argument from Analogy;" or, the bony union of fractures of bones within synovial membranes, as in fractures of the patella and olecranon. This argument seems to many to be conclusive, and it is urged, as such, by men of eminence in their profession. A slight

examination will, however, show points of difference sufficient to destroy all analogy and all arguments derived from analogy. 1. The patella is not a part of the skeleton. It is a sesamoid bone developed in the tendon of the quadriceps extensor muscle, to afford this muscle greater leverage. 2. It is a flat bone, while the head of the femur is spheroidal. 3. It is more fully nourished than the head of the femur. The head of the femur, in cases of fracture, derives its nourishment entirely through the ligamentum teres, a small rounded tendon; while the flat, strong band of tendinous fibres, composing the ligamentum patella, passes over the entire length of the patella. This ligament is so large that it would be more fitly denominated the tendon of the quadriceps extensor muscle. The whole anterior surface is covered with synovial membrane, and there is a fold of synovial membrane reflected behind the patella, termed the ligamentum mucosum. The knee joint is the largest joint in the whole body, and the patella being a flat bone, there is a greater amount of surface in proportion to the size of the bone to receive nourishment from the synovial membrane and fluid, than is the case in the head of the femur. Again, the knee joint is more abundantly nourished than the acetabulum. We find five arteries of considerable size passing to the joint—so large as to be described by anatomists. They are the two upper articular arteries, the two lower articular arteries, and the middle articular artery. Of these, the middle branch or external articular artery, goes directly to the patella; and the lower internal articular artery sends branches directly to that bone. These five arteries form a net-work of vessels at the front and sides of the joint, so that the patella has an abundant supply of blood in cases of fracture—unless these vessels are destroyed. Most fractures of the patella occur from a sudden strain, rather than from direct violence, so that in the majority of cases there will be abundant nourishment to the fractured patella.

The olecranon has scarcely more analogy with the cervix femoris than the patella. Instead of being attached by a small ligament, like the ligamentum teres, there is the powerful ligament of the triceps extensor muscle—a tendon far more capable of supporting a bone as large as the head of the femur than the ligamentum teres. But it has no such work to perform. The olecranon has other and ampler sources of nourishment, being covered on one side by cartilage, and on the other by the synovial membrane of the joint. The synovial mem-

brane of the elbow joint is far larger, in proportion to the size of the olecranon, than is that of the hip joint to the size of the head of the femur. We regard it as established, therefore, that the prospects of union are far more favorable in cases of fracture of the patella and olecranon, than in cases of fracture of the cervix femoris. But what results are obtained in cases of fracture of the patella and olecranon? Almost invariably union by ligament. The union by bone is the exception, and so rare an exception that the specimens are preserved in museums, as curiosities. These reasons place the improbability of union beyond a reasonable doubt.

Again, the non-union of cases, where everything was favorable, affords a strong *probability* that union does not occur. I will quote two of these cases for illustration.

I am indebted to Dr. James R. Wood, of this city, for the following history, which he has kindly furnished me, of a case which occurred in his own practice, and I take great pleasure in acknowledging the favors I have received from him, both in the privileges of his museum and also in his library, and the facilities he has afforded me in the investigation of this subject:

Case 1.—History.—M. J., a young lady, æt. 16 years; of vigorous constitution; perfectly free from any constitutional taint either of scrofula, syphilis, or cancer; was caught between the wheels of two carriages, the one stationary, the other in motion. The blow was received directly on the trochanter major of the right side. The symptoms which presented themselves showed conclusively that there was a fracture. There was shortening, loss of voluntary motion, and eversion; by placing the finger on the trochanter major, and the thumb in the groin, a well-marked crepitus could be felt on extension and rotation being made. There was no laceration or other complication of the injury. She was placed on Amesbury's splint, with side splints accurately adjusted, and every precaution taken to ensure a perfect union. The limb was kept on this splint without being disturbed for six weeks. At the end of that time, it was taken from the splint, and examined with care. The signs of fracture still remained; the limb was replaced on the splint, and the dressings as before; everything was attended to in the general management of the case which the doctor thought would be conducive to perfect union. The patient was kept for three weeks longer on the splint, which was then removed. It was found that there was no union. Patient

lived for three years, and was so lame that she was always obliged to use a crutch in walking. At the expiration of three years she died of an acute disease.

Post-Mortem Examination.—On examination of the cervix femoris, it was found that there had been a transverse fracture of the bone just at the junction of the head and neck. The head of the bone was still attached to the acetabulum by the ligamentum teres. The process of absorption had been going on, and the head of the bone had already been absorbed below the level of the acetabulum, and what remained was soft and spongy, easily broken with the handle of the scalpel. The neck of the bone was rounded off, and covered with a fibrous deposit. This was not a case of diastasis, as has been suggested by an eminent surgeon, who judged simply from the age of the patient. She was full sixteen when the accident happened, and over nineteen when she died.

Remarks.—This case makes a very strong argument against union by bone. Here, every circumstance was favorable. The age of the patient, her constitution, the immediate diagnosis of a fracture, and the subsequent treatment, were favorable to osseous union, if it were possible that such union could take place under *any* circumstances where the fracture was within the capsule. She was not an old patient, past the prime of life, in whom the vital energies were nearly exhausted, as are most of the patients in whom osseous union is claimed to have taken place, but at the most vigorous period of life, just after ripening womanhood has given full strength and power to all her functions; a period when nature is prodigal in her endeavors to aid, and when her recuperative powers are the strongest. She was not broken down by constitutional disease, produced either by her own or her parents' errors, but in perfect health, free from *all* constitutional taint, either of scrofula, syphilis, or cancer.

There was no mistake in the diagnosis of the case, as in one of Mr. Smith's so-called cases of osseous union. Here the diagnosis was made at once, and made correctly. The treatment, also, was adapted to the nature of the fracture. The patient was at home, among her friends, where every wish of her attending surgeon could be carried out. And to those acquainted with the surgeon in attendance, his name alone would be a guarantee that everything requisite in the treatment was attended to, even had no mention been made of the dressings in the case.

Those dressings were Amesbury's splint, with side splints;

a form of dressing insuring perfect rest of the parts. These dressings were kept on for six weeks undisturbed, then the limb was carefully examined, dressings replaced, and continued for three weeks longer; everything, meanwhile, being attended to which the surgeon in attendance thought conducive to union. Under these most favorable circumstances for osseous union, this result was not obtained; the patient remained a cripple for life; the process of absorption of the fractured end of the bone went on, and at the time of her death the parts were found as already described. If this was the only case of the kind which could be adduced, then it might be regarded as a rare exception; but cases of the kind can be easily multiplied, quite as conclusive as that just mentioned.

There is in the museum of Prof. William H. Van Buren, of the University Medical College, a specimen precisely in point. I am under obligations to Prof. Van Buren for the history of the case, which he furnished me, and also for the privilege of fully examining the specimen.

**Case 2.—History.*—The patient was a man, *æt.* 25 years; robust; in good health. He was dancing at his sister's wedding; while cutting a pigeon wing, he struck the foot upon which he was resting from under him, and fell, striking directly upon the trochanter major. He was unable to rise; a carriage was called and he was taken directly to the New York Hospital. There he came under the charge of Dr. J. Kearney Rodgers. A fracture was immediately diagnosed, and for a few days he was kept on the double inclined plane. The straight splint was then used, and the dressings kept up for six weeks, at the end of that time they were taken down and the limb examined: there was no union. The limb was continued in the straight splints for three weeks longer, and again examined—there was still no union. The patient was again replaced in the straight splint for two weeks longer, but no union occurred. At the end of three months from his admission, he was discharged; he was in good health, but so lame that he was obliged to use two crutches in walking. After his discharge, the patient became very intemperate; and, in the course of a few weeks, he applied for admission to Bellevue Hospital. He was much debilitated, and had an exhausting diarrhœa. Shortly after his admission, an immense abscess formed over the joint, which discharged profusely. The man died shortly after, from exhaustion, and the specimen came into Dr. Van Buren's hands, the patient having been in his service. Dr. Van

Buren was aware of the patient's previous history, the treatment, etc., at the New York Hospital, and a careful examination was made.

Post-Mortem Examination.—The capsular ligament was destroyed entirely by the suppurative process; there was a formation of callus upon the trochanter major; the ligamentum teres was entirely absorbed; the head of the bone was spongy, as if worm eaten; the direction of the fracture was oblique, commencing just at the articulating surface of the head and ending just within the capsule; the upper end of the shaft of the bone showed this same appearance that was marked in the head. These points are beautifully shown in the specimen at the present time. The opinion of Charles E. Isaacs, M.D., the able Demonstrator of Anatomy of the University Medical College, is, that this fracture was entirely within the capsule.

Remarks.—Here was a strong, healthy man, in the prime of life, with no constitutional taint, with an immediate diagnosis of his fracture, and immediate and proper treatment, and that treatment continued for three months, under the supervision of Dr. J. Kearney Rodgers, with all the advantages of the New York Hospital, where more fractures are treated than in any other institution in this country; everything being attended to that would facilitate union. The patient's general health was carefully attended to as is shown by his condition at the time of his discharge. Notwithstanding all these advantageous conditions, there was no union. If health, constitution, youth, and good treatment give no such results, what are we to hope for from age and debility?

We shall now proceed to analyze the specimens which have been brought forward to prove the union of intra-capsular fracture of the cervix femoris. If there is a single specimen, about which there could be no doubt of there having been a fracture entirely intra-capsular, and of that fracture uniting by osseous union, that specimen would settle the possibility of osseous union in cases of intra-capsular fractures of the cervix femoris. But is there a single specimen of this kind in existence? Robert W. Smith, of Dublin, in his excellent work on *Fractures*, claims to have collected facts which settle this question. He has searched the museums of England, Ireland, and France, for their choice specimens, and has been able to collect only seven which have any pretense of this kind. Prof. Willard Parker, of this city, has

one; Philadelphia claims to have two; and Prof. R. D. Mussey, of Cincinnati, has three specimens, which he alleges are perfect illustrations of the osseous union of intra-capsular fractures of the cervix femoris.

The greatest number collected are in the work of Robert W. Smith, of Dublin, on *Fractures*; they are seven in number. The first of these cases is that of Mr. Langstaff's, which is the strongest case; the notes of this case, both as published in the *Medico-Chirurgical Transactions*, vol. 13, page 491, No. 242, and in Mr. Smith's work on *Fractures*, page 57, are extremely meagre. Mr. Smith's report is as follows (page 57):—"In this case, the patient was a female, æt. 50 years, when the fracture happened. She was confined to her bed for nearly twelve months after the occurrence of the accident, and during the remainder of her life, a period of ten years, walked with crutches. On dissection, it was found that the principal part of the neck of the bone was absorbed; the head and remaining portion of the neck were united, principally by bone, and partly by a cartilaginous substance. On making a section of the bone, it was evident that there had been a fracture of the neck within the capsular ligament, and that union had taken place by osseous and cartilaginous media. With a view of ascertaining whether there was real osseous union, the bone was boiled many hours, which, by destroying all the animal matter, satisfactorily proved the extent and firmness of the osseous connection, and exhibited the spaces which had been occupied by cartilaginous matter."

No mention is made of the treatment adopted in the case. The only statement that can in any way be considered as bearing on this point, is that she was confined to her bed for twelve months. This was probably because she could not get up, for if Mr. Langstaff had required her to be kept in bed, as a part of the treatment, he would doubtless have mentioned it. He does not state whether any splints were used, or any other means adopted to keep the parts in coaptation. These are important particulars; for Mr. Smith says (page 64) it is by contact and rest, that we are to hope for bony consolidation.

Again, all the proof of there ever having been a fracture must be derived from the statement of Mr. Langstaff; for there is not a single symptom, nor a single fact mentioned, to lead to such a conclusion, except that the woman kept her bed for twelve months after the accident, and was afterwards lame for life. Nor does he give us any reason where-

by he came to this conclusion from the autopsy. There are no measurements given to show how far within the capsule the fracture was; or, how near to the capsule the fracture approached at its nearest point of approximation. In fine, the capsule itself is not preserved, or even the smallest portion of it, from which to furnish points of measurements. Nothing is given but the simple statement of Mr. Langstaff, that, "On making a section of the bone, it was evident that there had been a fracture of the neck within the capsular ligament, and that union had taken place by osseous and cartilaginous media." In all cases of controversy, the public have the right to know the reasons upon which an opinion is founded, especially if they are called upon to believe that opinion. In this particular case, it was of the utmost importance that, instead of mere assertion, a systematic statement of the case should have been given, with measurements from certain fixed points, and minute descriptions of the various abnormal peculiarities; that, from these measurements and descriptions, logical conclusions might have been drawn.

Mr. Langstaff makes the statement that the head of the bone was united to the shaft by bone, and that the neck was absorbed. The same objection exists to this which did to his first statement; he gives us none of the reasons whereby he came to the conclusion that this was the head of the bone which remained; he does not inform us whether the ligamentum teres was attached to it or not; he does not mention whether the vessels of the ligamentum teres were enlarged or not, as they would be had they sustained the head of the bone, and also furnished the osseous union existing. In fine, the notes are so carelessly taken, that he does not mention whether there was a ligamentum teres or not. There is no ligamentum teres represented in the engraving; it is presumed that the engraving is a fair representation of the specimen,—for it is presented for that purpose by Mr. Smith. As nothing is said of a ligamentum teres, and none is shown in the plate that represents the specimen, it is right to conclude there was no ligamentum teres. This was probably a case of the absorption of the head of the bone, from the results of the injury. This is rendered probable from analogy and from the facts in the case. Illustrations of this absorption of the head of the bone are abundant; we find them in this same article of Mr. Smith's, page 71, Case 6. (Esther Christie.) In that case we are told: "The upper fragment has been absorbed as far as the acetabulum, and the ligamentum teres was the sole remaining attachment of the bone."

Here the process of absorption of the fractured head of the bone is going on, the head of the bone is absorbed as far as the acetabulum, while the surface of the lower fragment is becoming "*covered with a fibrous deposit, though still rough,*" to enable it to fulfill its new function. Case 7, page 72 (Mary Lamb), gives the same process of absorption going on. In this case, the patient died twelve months after the injury, yet the head of the bone is absorbed as far as the acetabulum, and fibrous structure formed, all of which had been accomplished in the space of twelve months. If, in this old woman, eighty years of age, absorption had gone on as rapidly as here stated, is it improbable that the whole head of the bone should have been absorbed in the case of Mr. Langstaff, when the patient lived, not merely twelve months after the injury, but nearly eleven years, and was only fifty years of age instead of eighty? If further illustrations of this absorption of the head of the bone were desired they could easily be multiplied. The case of Dr. Wm. H. Van Buren's is in point; in that the ligamentum teres was absorbed besides the process in the head of the bone. The case of the girl M. J., under Dr. Wood's charge, is another case in point. There is still another specimen in the museum of Dr. James R. Wood, that illustrates this point; it was taken from a woman fifty-four years of age; all the usual signs of fracture were fully made out; the limb was immediately placed on a double inclined plane, and retained so for nearly two months; the woman had no control over the motions of the limb, she was unable to walk without a crutch, and when she died, two years after the occurrence of the injury, the specimen came into Dr. Wood's possession. At his clinical lecture at Bellevue Hospital, Saturday, January 3, Dr. Wood exhibited the specimen to the students. The patient, he stated, died of pneumonia two years after the injury. The autopsy exhibited the fracture entirely within the capsule; on cutting into the thickened capsule, the head of the bone was *found lying loose in the cavity*; the ligamentum teres was *entirely absorbed*; the head of the bone had become exceedingly light and soft, easily broken up with the handle of a scalpel, the neck of the bone was becoming rounded off to fulfill its new function, and the neck was becoming covered with fibrous matter. These cases demonstrate conclusively the fact that, in fractures of the cervix femoris within the capsule, the head is often undergoing the process of absorption, and it is not unreasonable to conclude that, in this patient of Mr. Langstaff, where she

lived for so long a time after the injury, this process was completed.

In the case of Mr. Langstaff's, the patient was confined to her bed for twelve months, and lived ten years, during which she was lame; if the head of the bone remained, as is claimed, and the union was by bone, if the ligamentum teres remained, as it must have done to have produced this bony union, then the patient should have had the use of the limb; but, on the contrary, she was lame for life—so lame that she had to walk with crutches, though she lived for a period of nearly eleven years after the injury; a circumstance easily understood, if this process of absorption of the head of the bone was going on during this time.

The next case adduced by Mr. Smith to support this view, is that of Dr. Brulatour, page 58 of Mr. Smith's work; also, vol. 13, page 512, *Med. Chirurg. Transactions*.

Dr. James, an English physician, residing at Bordeaux, æt. 47 years, was thrown from his horse, on March 29, 1826. He fell directly on the great trochanter, but got up and walked a step or two, which occasioned such acute pain in the hip joint that he instantly fell again; on examination immediately after the accident, Dr. Brulatour observed the principal signs of fracture of the neck of the femur, such as shortening of the affected limb, eversion of the foot, and a feeling of crepitation in the joint when counter extension was made; extension of the limb was kept up for two months, so as to preserve it of its natural length. Three months after the receipt of the injury, Dr. James was able to walk with only the assistance of a cane, and subsequently recovered the full use of the limb. On the 20th of December, nine months after the accident, he was attacked with hæmatemesis, which proved fatal in two days. The post-mortem examination of the right hip joint showed the capsule a little thickened; the cotyloid cavity and inter-articular ligament in a natural state; the neck of the femur shortened; an irregular line surrounding the neck, denoting the direction of the fracture, and considerable bony deposit at the bottom of the head of the femur, and at the external and posterior part. A section of the head of the femur was made, in a line drawn from its center to the bottom of the great trochanter, so as perfectly to expose the callus. The line of union, indicated by the callus, was smooth and polished as ivory; the line of callus denoted also, that the bottom of the head of the femur had been broken off at its superior and posterior part.

If these notes prove anything, they prove too much; for it is stated that "an irregular line surrounding the neck, denoting the direction of the fracture, and considerable bony deposit at its external and posterior part." "The line of callus, denoted, also, that the bottom of the head of the femur had been broken at its superior and posterior part." If this statement is true, what must have been the nature of the injury? Evidently a comminuted fracture entirely within the capsule; for, the first line denoted that the head of the bone had been fractured off from the shaft of the bone, a second line indicated that the bottom and posterior part of the head had been fractured off from the remainder. If the periosteum was injured, and I can not imagine it to be otherwise, how would it be possible that this third portion of the bone should be nourished? If the head was nourished by the ligamentum teres, and the portion connected with the shaft by the nutrient artery of the femur, how would this third piece be sustained? Yet it had been nourished, and was united to the remainder "by callus as smooth and polished as ivory." Another point: the report states that "the ligamentum teres was in a natural state," and we are informed that the head of the bone was fractured off in such a way, that the larger part of it could only be nourished by the ligamentum teres. The ligamentum teres had in addition to its usual functions nourished this, and had assisted in the formation of the existing callus. When an artery performs an additional function, that artery becomes enlarged. This is constantly seen in the anastomotic circulation of a ligated vessel—the inosculating branches soon enlarge to the size almost of the original vessels, whose place they have supplied. In this case the vessels of the ligamentum teres had to perform their own functions, and in addition to nourish this fractured head, and assist in the formation of callus, yet they were found in a natural state. We may add that Mr. Smith is in error in stating that "It is highly probable that they have *all* been examples of *impacted fractures*;" "the displacement of fragments has been prevented;" for in this case the limb was at first shortened, and then by dressings drawn down to its natural length.

The third case is that of Mr. Stanley, of which the notes are as follows:—A young man, æt. 18 years, fell from the top of a loaded cart upon his right hip, the injury of which was attended with the following symptoms:—he was wholly una-

ble to move the limb; the thigh was bent to a right angle with the pelvis, and could not be extended; abduction was difficult; the limb was everted; but there was no shortening, nor could crepitus be felt in any motion of the limb. The patient died of what was supposed to be small pox, about three months after the occurrence of the accident. In the examination of the joint after death, the capsule was found thickened, the round ligament uninjured; a line of fracture extended obliquely through the neck of the femur, and entirely within the capsule; the neck of the bone was shortened, and its head approximated to the trochanter major. The fractured surfaces were in the closest apposition, and firmly united nearly in their whole extent by bone; there was an irregular deposition of bone upon the neck of the femur, beneath its synovial and periosteal covering, along the line of the fracture. At the end of his report, page 59, Mr. Smith refers to the *Medico-Chirurgical Transactions*, vol. 18. On reference to this volume, we find the following important facts which Mr. Smith has omitted in his extract:—"The age of the patient was unfavorable to the occurrence of a fracture at the neck of the thigh bone. The general opinion, therefore, of the several surgeons to whose judgment the case was submitted, favored a belief of a dislocation into the foramen ovale. Forcible extension of the limb was made by pulleys, and the thigh then moved in several directions by which the head of the bone might be replaced in its socket." These facts which Mr. Smith has omitted, bear directly against the position he has assumed. For immediately after giving the seven cases, of which this is one, he says (page 64) "The preceding cases furnish ample evidence of the possibility of osseous union in cases of intra-capsular fracture of the neck of the femur, and it is highly probable that they have *all* been examples of impacted fractures. Certainly, in all those of which delineations have been given, there has been either penetration of one fragment by a portion of the other, or else the irregularity of the line of fracture has been such, that the displacement of the fragments has been prevented. They have been maintained in contact and at rest, and it is under such circumstances alone, that we are to hope for the occurrence of bony consolidation." These are singular comments upon a case in which the limb was forcibly extended by pulleys, and then rocked. If this was a case of impacted fracture, how long would it remain so, after forcible extension by pulleys and rocking? Yet, according to Mr. Smith,

it must have remained an impacted fracture ; for under those circumstances alone, does he believe we are to hope for bony union.

To an intelligent surgeon, it will be a sufficient refutation of Mr. Smith's assumptions, by simply stating the following facts. The case was at first treated for a dislocation, and not till the second month was the patient brought to the hospital. Shortly after his admission, he was attacked with an exanthem of which he died. Is it probable that a fracture within the capsule of the cervix femoris, mistaken for dislocation, would have that perfect contact and rest (a *sine qua non* of ossificunion with Mr. Smith), without which we can not hope for bony consolidation, when the limb is first forcibly extended by pulleys and rocked, then the patient is removed to a hospital, where he soon after dies from an attack of acute disease, and all this occurring within the space of three months, from the injury ?

Case 4—(Mr. Swan's case).—Mr. Smith's notes are as follows:—"Mrs. Powel, above 80 years of age, fell down, November 14, 1824. Sir Astley Cooper, who saw her soon after, believed that there was a fracture of the neck of the femur, although there was no appreciable shortening of the limb, and only a slight inclination of the toes outward ; crepitus could not be perceived ; the patient died about five weeks after the accident ; upon examination of the joint after death, the fracture was found to have been entirely within the capsular ligament, and the greater part of it was firmly united. A section was made through the fractured part, and a faint white line was seen in one portion of the union, but the rest appeared entirely of bone. The cervical ligament had not been injured." (Smith, page 59.) In this case, the patient was an old lady, above 80 years of age, with the fracture not certainly made out ; there was no appreciable shortening of the limb ; no crepitus ; and only a slight inclination of the toes outward. The strongest point in favor of there having been a fracture, was the opinion of Sir Astley Cooper, which opinion is entitled to great weight ; but there are no satisfactory facts given upon which he formed that opinion. This slight eversion of the foot might be given by the patient to relieve the tension on the bruised and inflamed part. We may well query if the vessels of the ligamentum teres would not have shown evidences of having performed an increased function ? Would five weeks have been sufficient time for them to furnish osseous union, and resume their original size ?

Again, the old woman died in five weeks after the receipt of the injury. Now, it seems to us quite improbable, nay, impossible, that bony union of an intra-capsular fracture of the femur in an old woman, above eighty years of age, in whom *there was not left vitality enough to sustain life*, should take place in five weeks after the injury—in *less time than is allowed for the ordinary union of a fracture of the shaft of the femur in a healthy person in the prime of life*.

Case 5—(Mr. Adams' case).—This case is reported more fully and is accompanied with an engraving, illustrating it, page 61. The engraving must be considered correct—for it is fair to presume that it would not be made to represent the case any more unfavorable to the side of the question Mr. Smith argues than the facts in the case required. Now, this engraving shows the line of union to extend nearly to the base of the trochanter minor, a point far without the capsule. (See second engraving, on page 61, SMITH on *Fractures*.) This makes it a case of fracture partly within and partly without the capsule—a class of fractures which every one admits may readily unite by bone.

Case 6—(Mr. Jones' case).—Of this case Mr. Smith makes the remark, page 63: "this specimen was sent to Sir Astley Cooper for examination; Sir Astley was of opinion, that the fracture was 'in part within, and in part external to, the capsular ligament; in part united, and in part not; and the neck of the thigh bone absorbed.'" This excludes it from the class of intra-capsular fractures.

Case 7—(Mr. Chonly's case).—Mr. Smith says of this case, "A portion of the upper fragment extended in one situation, a little external to the capsule, this portion was not united." Mr. Smith adduces this to prove that intra-capsular fractures unite, and yet admits it does not belong to the class, and is not an intra-capsular fracture.

This completes the specimens adduced by Mr. Smith, to prove this ossific union of intra-capsular fractures of the cervix femoris. It will be remembered these are not the specimens of one country alone, but the choice specimens culled from the museums of all Europe. In this country, the largest number of specimens are in the possession of Prof. Mussey, of Cincinnati. He claims to have three specimens which prove this.

Of these three, the most valuable one is that about which Prof. Mussey and Dr. Dalton, of Lowell, Mass., maintained so long a controversy. The circumstances of the case, as far

as we have been able to gather them from Prof. Parker's lecture, and from the statements of Dr. Morrell, of Borodino, N. Y., who was one of Prof. Mussey's students shortly after the controversy, are as follows:—The patient was a teamster, away from his home in Northern New Hampshire when he met with the accident; Dr. Dalton became satisfied there was a fracture, and treated him for it. The man became dissatisfied. Dr. Dalton boxed up the leg and sent the man home, a distance of more than one hundred miles, in one of the ordinary country wagons, over the rough roads of that hilly country; on his arrival home, the man's limb was examined by Prof. Mussey, about three weeks after the injury, the dressings removed, yet no fracture could be found; Prof. Mussey maintained this opinion till he came in possession of the specimen, which he thought showed conclusively there was a fracture within the capsule, and which had united by bone, when he made the *amende honorable*. If we had only these facts to rely upon, they would be sufficient to throw a doubt on the nature of the injury. No matter how skillful the surgeon might have been, or how favorable the circumstances surrounding the patient, it would have been impossible to have obtained an union of a fracture entirely within the capsule in four weeks' time. Dr. Dalton may have boxed up the limb in the most skillful manner, and he is a surgeon of high repute in Eastern Massachusetts, yet, it would have been impossible to have applied his pressure so equally as to keep the head of the femur still—jolted, as the man must have been, in one of those old-fashioned, springless wagons, over the half-built mountainous roads of Northern New Hampshire, for a distance of a hundred miles—and yet have, at the end of that journey, an union of an intra-capsular fracture, so perfect that Prof. Mussey denied there ever had been a fracture there.

But these are not the only facts in the case; Dr. Blackman (editor of *VELPEAU'S Operative Surgery*,) has given us the true explanation of the case. In his review of *MALGAINE on Fractures*, while discussing this question of intra-capsular fractures, states (*New York Journal of Medicine*, Sept., 1855,) that Prof. Mussey took this specimen to Sir Astley Cooper, to convince him of the possibility of bony union of intra-capsular fractures; but Sir Astley decided this to be a case of fracture, *partly within and partly without* the capsule.

Of Prof. Mussey's two remaining specimens I have been unable to procure histories. I have conversed with a surgeon

of eminence of this city, who has examined them carefully, and he says they are no more satisfactory than the one already referred to. Dr. Bauer, of Brooklyn, has also recently examined them, and is very strongly of the opinion that they are not specimens of intra-capsular fracture.

Since the above was written, we have received the *American Journal of Medical Sciences*, for April, 1857. The leading article is by Prof. Mussey, detailing his cases of "Fracture of the Neck of the Thigh Bone."

We are gratified to find the facts of Case 1, as above stated, corroborated by Prof. Mussey in all essential particulars. In this article, Prof. Mussey admits his inability to convince Sir Astley. He details his interview as follows:—

"On my presenting it for inspection to Sir Astley Cooper, he remarked, 'this bone never was broken,' I said, 'Sir Astley, please to look at the interior of the bone;' he separated the two halves and said, 'this does look a little more like it to be sure, but I do not think it is wholly within the capsular ligament.' It is well known that Sir Astley Cooper, for some years, had taught the doctrine that bony union does not take place in intra-capsular fracture; his views, among the surgeons of Great Britain, were extensively admitted as correct."

This last remark, following, as it does, his account of his interview with Sir Astley, would appear to be Prof. Mussey's assigned reason for his own success.

It is possible that Sir Astley Cooper was so prejudiced as not to admit as facts, points that, at best, were but *doubtful*, but it will hardly be presumed that Sir Astley Cooper would deny facts *about which there could be no reasonable doubt*. This is not the only occasion in which Sir Astley's motives have been impugned. A distinguished lecturer of this country has, in his public teachings, declared that Sir Astley Cooper, by teaching this doctrine of the non-union, "had done more harm than he had ever done good in his life," but those who have studied Sir Astley's works, with an unprejudiced mind, would prefer to believe that he lived alone for truth, for science, and his profession.

Sir Astley Cooper is not the only surgeon of distinction whom this specimen has not convinced. Prof. Mussey mentions John Thompson, of Edinburgh, a surgeon of eminence as well as an author of a work upon inflammation, as one who was not convinced by this specimen.

As to Prof. Mussey's sweeping statement:—"The profes-

sional gentlemen of our country, who have examined these specimens, unhesitatingly pronounce this to be a case of union by bone of intra-capsular fracture," if he will take the trouble to ascertain the opinion of many of the New York surgeons, who have examined this specimen, he will find that this assertion will admit of essential modifications.

Prof. Mussey details several other cases in his own and in other's practice—but this is his best specimen. He also makes some valuable suggestions as to the manner of union and his method of measurement. And we refer, with pleasure, those interested to the *American Journal of Medical Sciences*, for April, 1857, for a further elucidation of his views.

In regard to the Philadelphia specimens, my only source of information is the brief notice of them in the new work on Surgery, by Prof. H. H. Smith, of Philadelphia. His statement is as follows (page 399):—"There is in the Wistar and Horner Museum of the University of Pennsylvania, a femur, apparently of an old woman, in which the neck has been fractured near the head, yet, in which complete osseous union, though with some degree of shortening, has taken place. I have, moreover, in my own cabinet a specimen in which the bone has been fractured through the neck near the head, the fragment having slid down beneath its natural position, and the fracture traveled obliquely down the neck, though still within the capsule, splitting it off in the line of the inter-trochanteric ridge. In this case, which must have produced marked shortening of the limb, there is complete osseous union." This report is so exceedingly brief that no inference can be drawn from it, in fact, the writer does not appear to know whether the specimen is from a male or female. If this is true, then he knows nothing of the history of it. He does not give us the direction of the fracture, or a drawing of it, or even a positive statement that it is entirely within the capsule. In regard to his own specimen, he is more explicit; he gives a drawing and shows that the fractured head has slipped down, and even now the line of fracture can be traced to the inter-trochanteric line. If this is so now, it is probable that the end of the fractured bone extended below the capsule in the first place, as in all cases of fracture, where there is not perfect coaptation, the rough points become absorbed. If we allow for this absorption, it would make the end of the bone below the trochanteric line, a point without the capsule, thus excluding it from this class. If we adopt Prof. Smith's view, that this was entirely within, we

meet with an objection ; he states that the head of the bone has slipped down beneath its natural position, and the fracture has traversed it obliquely. This, of course, could not have been an impacted fracture, for in an impacted fracture we should have had the shaft of the bone driven into the cancellated portion of the head—not the head of the bone “slipping down” along the shaft. If this was a case of slipping down of the head, we leave Prof. Smith, of Philadelphia, to controvert the position taken by Mr. Smith, of Dublin, where he says that only *impacted* intra-capsular fractures can have an osseous union.

There remains but one more specimen to examine. This belongs to Prof. Willard Parker, of this city. I am under obligations to Prof. Parker, for his kindness in explaining to me the various points which he considers the case presents. He loaned me the specimen to examine at my leisure, that I might become thoroughly acquainted with all the facts of the case. According to the description of the case given by Prof. Parker, in his lecture, the patient was an old maid, of about sixty years of age, an inmate of the almshouse, of Barnard, Vt. One morning, while going out of doors, she fell striking upon her hip. The doctor in attendance, who did not pretend to be a surgeon, or accurate in his diagnosis, came to the conclusion that there was a fracture. He was of the opinion that he obtained crepitus, accordingly he dressed the limb with the straight splint for six weeks, and at the end of that time found half an inch shortening. The specimen afterwards came into Prof. Parker's possession. The points Prof. Parker relies on to show that this was a fracture, are:—1. The supposed crepitus. 2. A ridge of bone along the inter-trochanteric line, termed the “callus.” 3. The neck of the bone shortened on the outer side one-third of an inch more than on the inner side, this being accounted for on the supposition that it was produced by the position the limb was allowed to retain. 4. No such changes are to be found in the femur of the opposite side, which is pronounced healthy. These specimens were procured four years after the injury. The capsule is entirely gone, and there is nothing to show positively where it was inserted ; a line is pointed out about three lines below the so-called callus, as the line of insertion of the capsule. On examination of the interior of the specimen, there is nothing to indicate the line of fracture ; no callus as is shown on internal examination of other fractures of long bones. There is one point very marked on

the inner edge of the compact structure of the shaft, it is what Sir Astley Cooper terms a "buttress of bone" shooting up from the body into the neck and head, evidently as a support to the head in the new angle which it has assumed, with respect to the shaft. This buttress is formed apparently by the cancellated structure being more compact than in other points. On comparing this specimen with the femur of the well limb, a very marked difference is observable: this line or buttress is stronger, better developed, and is evidently for the purpose of giving support to the head of the bone in this new position. The specimen is far from being satisfactory. If this rough line extending along the inter-trochanteric line, is in reality the line of callus, then it is extremely probable that the fracture was partially *extra-capsular*. For if the capsule extended along the line which runs below this line that is pointed out as the line of fracture, then the insertion of the capsule must have been as low down as the middle of the trochanter minor, an anomaly in regard to insertion of the capsule. If this really was the line of insertion, it is extremely unfortunate that the capsule was not left to show really where it was inserted.

Again, there is no callus on the inside of the bone corresponding to this so-called external callus, but throughout the whole line corresponding to this external "callus," the cancellated structure is perfect. If it should be admitted that crepitus was here obtained, a point which is extremely doubtful, as we have only the opinion of a doctor who practiced many years ago in the small town of Barnard, Vt., a town which now numbers less than two thousand inhabitants,—if it should be admitted on such authority that this was a fracture, still it is by no means established that this was an intra-capsular fracture; for this so-called callus extends along the inter-trochanteric line. The capsule itself is gone, so that it can not be shown positively where it was inserted, and it is probable if there was a fracture, it was partly extra-capsular.

Again, the view which Prof. Parker takes of his specimen conflicts with that taken by Robert W. Smith, of Dublin, on fractures of this class, in his work already quoted. For if there was crepitus, then there must have been motion of one fragment or the other; and if there was motion, then the fracture was not impacted; and it is only this latter class which Mr. Smith contends can unite. My own impression is that there never was a fracture here at all. I think this

is a case of *interstitial* absorption of the neck of the bone; the cause of this absorption being the contusion received by the fall. This view is sustained by analogy. Sir Astley Cooper says this is common in old people; in his work on *Surgery*, vol. 2, pages 314 and 315, Lee's edition, we find the following:—"As the shell becomes thin, ossific matter is deposited on the upper side of the cervix, opposite the edge of the acetabulum, and often a similar portion at its lower part, and thus the strength of the bone is in some degree preserved. This state of things may be frequently seen in very old persons." "When the absorption of the neck proceeds faster than the deposit on the surface, the bone breaks from the slightest cause; and this deposit wears so much the appearance of an united fracture, that it might be easily mistaken for it before the bone thus alters. We sometimes meet with a remarkable buttress shooting up from the shaft of the bone into its head, giving it additional support to that which it receives from the deposit of bone on its external surface."

Mr. Liston, in his *Practical Surgery*, says:—"Gradual shortening of the lower extremity often ensues upon contusions of the hip in persons advanced in life, in consequence of interstitial absorption of the neck of the thigh bone, and alteration of the angle in which it is set upon the shaft. The head of the bone undergoes a change in form; it becomes flattened and expanded, and the cotyloid cavity is made to correspond. This cause of lameness ought to be kept in view. The risk of its occurrence ought to be explained to those who have suffered injury of the hip, and, if possible, it must be prevented.

Mr. Gulliver, in the *Edinburgh Medical and Surgical Journal*, No. 128, July, 1836, *et seq.*, has written very fully on this subject of interstitial absorption; and has adduced cases which we would copy, if our limits would allow. He shows, by his specimens, that the head is enlarged at its lower part; that these cases may occur in young persons; that it is not disease of the joint, from the fact that there is no ankylosis; and that the cartilages are not involved. The cases of John Lynn, J. McGath, and J. Fox, etc., are adduced, and the specimens preserved from autopsies. We have abundant evidence of interstitial absorption occurring from contusion in persons like this old maid, and Mr. Gulliver says this shortening may take place as rapidly as in five or six days. Now, Prof. Parker's specimen corresponds to the facts we have

given:—1. There is a ridge formed along the lower part of the neck, as Sir Astley Cooper states, occurs in these cases of interstitial absorption. 2. There is the buttress of bone shooting up from the shaft into the head as a means of support; this is clearly shown by comparing the two specimens, the one from the well limb, and the one from the contused limb. 3. There was a contusion sufficient for an exciting cause. 4. This occurs in one limb and not in the other, as shown in the case of J. Fox, reported by Gulliver, where one limb was in every respect natural, and in the other interstitial absorption had taken place. This, we believe, is the case in Prof. Parker's specimen. If this specimen is in reality a fracture, it was most probably partly extra-capsular; if not, it was a case of interstitial absorption.

I have thus reviewed all the cases of supposed osseous union. All of them are defective in points of great importance; no one of them places the question beyond a reasonable doubt, and it should be remembered that these are the choice specimens of all Europe and America.

There is a single point more worthy of notice; it is the extreme difficulty there appears to be, in all these specimens, of deciding whether they are intra-capsular, or only partly within. The mere fact that a surgeon of such eminence as Prof. Mussey should have been misled, and should have been so deceived as to take a specimen across the Atlantic, to convince Sir Astley Cooper of the possibility of the ossific union of intra-capsular fractures, by whom it was conclusively shown that he was in error, is sufficient to prove the difficulty of deciding on these specimens. All such specimens should be preserved in the wet state with the capsule still attached, when there could be no doubt of their character.

The argument may be thus summed up:—1. It is absolutely impossible to form a certain and unmistakable diagnosis of all these fractures during the life of the patient. 2. That the probabilities are all against union by bone, from lack of nourishment to the fractured parts of the head, from impossibility of perfect rest, and from synovitis. 3. The argument from the analogy of fractures of the patella, olecranon, etc., is an argument against, instead of for, osseous union. 4. Cases where every circumstance was favorable to union, if any fractures of this kind could unite, yet which failed to unite. 5. The cases given to prove this union not having proved it.

The *treatment* of these cases is obvious. It has been shown that a positive diagnosis can not be formed. It may be a case

of those kinds which do have a bony union. The patient is entitled to the benefit of this chance. If his age and health will permit, the straight splint should be used; while, at the same time, the surgeon should protect himself, by showing the patient and his friends what an unfavorable result there may be. If the fracture is impacted, it should by all means be kept in the impacted state, and all attempts to extend the limb to its proper length should be abstained from.

If the patient is past the prime of life, or of enfeebled constitution, then the double inclined plane splint should be used; and if the patient can not bear that, then simply let the limb rest over a pillow.

ART. IV.—*Extension and Counter Extension in the Treatment of Fractured Thigh, with Description and Illustrations of a New Apparatus.** By J. H. HOBART BURGE, M.D. Surgeon to Brooklyn Central Dispensary; late Surgeon to the New York Dispensary, etc.

EXTENSION and counter extension being, by common consent, a necessary part of the treatment of fractured thigh, it is obvious that the subject possesses inherent difficulties; otherwise, our profession could not escape the charge of culpable neglect in allowing nearly half a century to pass without any essential improvement in the appliances used for the purpose of reducing the limb to its normal length and position, and of maintaining it there.

Sir Benjamin Bell, writing in 1801, says, "An effectual method, indeed, of securing oblique fractures of the extremities, and especially of the thigh bone, is, perhaps, one of the greatest desiderata in modern surgery." The femur, being the longest of the long bones, and surrounded and acted upon as it is by the largest and strongest of all the muscles in the human body, must of necessity, when fractured, require great care on the part of the surgeon to retain the fragments in such relation for a sufficient length of time, as shall result in union without deformity. This very desirable result has been attained in so few cases, in proportion to the great number treated that we can not escape the conviction that some mechanical contrivance, better than any yet introduced, is greatly needed by the profession.

It is not necessary that I should review the means hitherto adopted for fulfilling the simple indications of *reduction* and *retention*. They are sufficiently well known, and, I may

* Read before the Brooklyn Medical Society.

say of nearly all of them, the objections to them are sufficiently obvious. The first great advance in this department was made by Desault, when he introduced the long straight splint extending from the crest of the ilium to beyond the foot. Indeed, so great was this improvement over every previous method, that, notwithstanding the important modifications which it has undergone at the hands of our own Physick and Gibson, Desault's name is never omitted in this connection. During the last half century, numerous contrivances have been proposed for the treatment of fractured thigh; and, though some of them possess real merit, I believe the surgical world would not hesitate to declare that Desault's splint, with Physick and Gibson's modifications, and the screw first introduced by Boyer, and since perfected by others, is worth more than all other means ever employed. And yet, my object in the present paper is to refer to its acknowledged defects, and to propose a plan by which, in my humble opinion, they may be obviated.

It is not my purpose to reply to what has been called "the persuasive eloquence of Pott" in his arguments for relaxing all the muscles of the thigh — nor to criticise the practice of any individual surgeon who has labored to furnish us with more reliable appliances for the treatment of the accidents under consideration, I appreciate all their efforts, and have no desire to detract from the honor which is justly due them.

The double inclined plane of Sir Charles Bell with its various modifications by Liston, Lonsdale, Amesbury, Spaulding, Jarvis, Nathan R. Smith, and others, is an excellent resource in cases where there is some special contra-indication to the straight position. But as I write now only for those who are familiar with the annoyances, and the results, of all methods of treatment yet in use, and as preference is generally given to the straight position, I shall deal with that alone in the rest of this paper.

The objections to the present form of the straight apparatus are—1. That the counter extending pressure falls heavily upon the groin (a most sensitive part) causing much pain to the patient, and, also, anxiety to the surgeon on account of the liability to excoriation and sloughing, and the consequent necessity of moving the perineal strap to the other groin, and perhaps, of removing it altogether, in which case the prospect of a shortened limb is by no means an agreeable one to any of the parties concerned. 2. The strap around

the waist, which though it be not tight enough to impede respiration, is a great restraint, and, to one of nervous temperament, almost insupportable. The patient must swallow both food and drink while in an absolutely supine position, and can perform no voluntary motion of the trunk whatever. Indeed, in fracture of both thighs, this confinement is as absolute as if he were in his coffin. 3. That the hips of the patient sink in the bed and are very liable to move away from the splint and thus throw the limb out of the proper line.

During the last year, my brother, Dr. Wm. J. Burge, and I, have devoted considerable time, thought, and money to the development of an apparatus which should not only be liable to none of these objections, but present, also, certain new features of great practical utility. After describing it and pointing out the advantages which we hope to gain, we shall leave it to the profession to decide how well we have succeeded in our effort. Our observations and experiments have led us to the following conclusions:—1. That the straight position is preferable in a large majority of cases. 2. That it is entirely unnecessary to confine any part of the body except the fractured limb and that to which it is immediately articulated, viz.: the pelvis. 3. That the pelvis should be so secured as not to be liable to lateral motion, or to sink in bed. 4. That the groin is not a suitable part for the counter-extending pressure to fall upon. 5. That the tuberosities of the ischia are proper points for such pressure. The correctness of these principles seems to us too obvious to require argument. We shall, therefore, spend no words upon them, unless they are called in question, but proceed at once to speak of our method of reducing them to practice.

First, then, in general terms, we retain the straight splint of Desault at its original length, that is, from the crest of the ilium to several inches beyond the foot, and make the extension in the usual way, by means of the screw, adhesive plaster, and roller. We discard the hitherto excellent modifications of Physick and Gibson, not only because they confine the chest, and prevent that freedom of motion of the upper part of the body, which is so essential to the comfort of the patient, but because we obviate the necessity of such confinement, by securing the pelvis, as already intimated, against all lateral motion, and, also, against the possibility of sinking in the bed. In order to prevent the pressure in the groin, we attach the counter extending pads, and straps, by one end to a cushioned platform, upon which the hips of the patient lie,

and, by the other, to a transverse horizontal rod, above and in front of his body, while we fix the upper end of the long splint at a point opposite the side of the pelvis, and independently of all direct connection with the counter extend-



ing pads, or straps. To be a little more explicit, our apparatus (see engravings, figs. 1 and 2,) consists of two short mattresses, occupying respectively the upper and lower portions of the bed, and also of a central portion, upon which rest the hips of the patient. This central portion is composed

of the following parts:—1. A firm, but easy, hair cushion, upon which the hips of the patient lie; this cushion is secured to a board, one foot wide and two feet long, which lies transversely under the body of the patient. Both the cushion and the board, present at the lower margin, a large V-shaped opening, for convenience of defecation; and in order still farther to facilitate this function, the cushioned board is elevated several inches upon a second platform, by a strip of board at each end, thus providing a shelf for the bed-pan, which is introduced through an opening formed by withdrawing a section of the lower mattress. Upon the cushioned platform, on each side of the cushion, you will observe a rectangular wooden slide; these slides are so arranged as to be separated or approximated at will, and, by a thumb-screw which passes through a fissure in the horizontal portion of each, they may be fixed at the desired point, so as exactly to embrace the pelvis of any patient. There is, also, a fissure in the perpendicular portion of each rectangular slide, and a screw passing through the same; one of these is to secure the upper end of the long splint, and the other for the attachment of a splint, eight or ten inches in length, both of which splints are well padded upon one surface, and may be elevated or depressed at will, in order to bring them to the level of the limb, and fixed at the proper altitude by the screws already mentioned. These splints are mutually transferable, in order to adapt the apparatus to a fracture of either thigh.

For the sake of distributing the pressure and making the patient more comfortable, we propose two counter extending pads instead of one. These we attach by leather straps to the upper surface of the cushioned platform upon which the patient rests, and about thirteen inches apart. These straps pass under the cushion, and, becoming well-rounded pads, traverse the tuberosities of the ischia, pass between the thighs, and thence, perpendicularly, to a horizontal iron rod, at an altitude of eight or ten inches above the patient, transversely to his body, and directly opposite the perineum; this rod is supported by a perpendicular bar at either end, extending upward from the cushioned platform already mentioned.

Attached by one extremity to the horizontal cross-bar, is a rod running parallel to, and situated directly above, the thigh. The other end of this rod is supported by an arched iron bar, extending upward from the outer side of the long splint. This is designed to afford direct support to the injured limb, whenever such support is deemed advisable, and will, we

believe, be of essential service in preserving the arched form of the femur. A silk handkerchief, or one or two belts of suitable width are to be passed around the limb (either internally or externally to the splints of coaptation,) and fas-

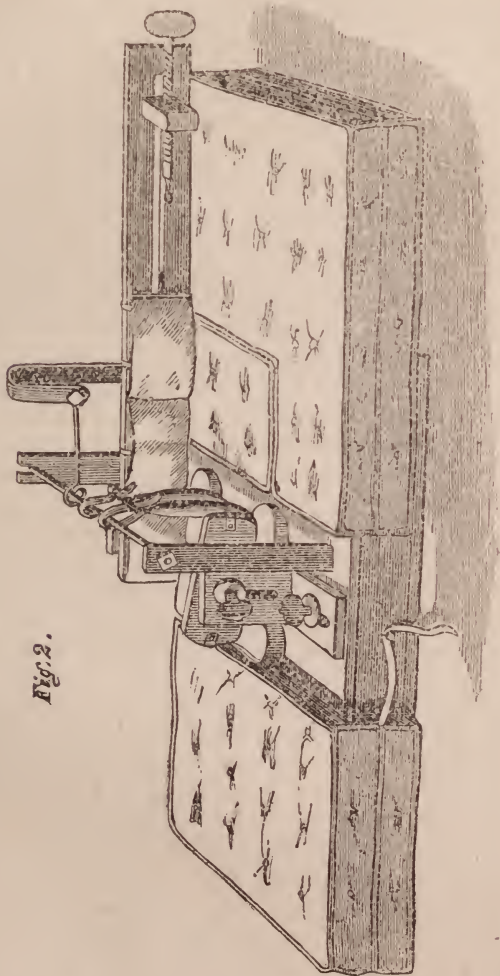


Fig. 2.

tened to the horizontal rod. When this apparatus is used, splints of coaptation are to be applied according to the exigencies of the case, and the views of the surgeon in attendance.

In its construction we have aimed at simplicity ; no surgeon

of ordinary ability can fail in its application, even without directions. I mention this as a feature of great practical importance. Complicated surgical appliances can never be used except by the few.

It will be asked if this is an expensive apparatus; this too is a practical question, and though I must refer the reader to the advertisement on another page for full particulars, I am happy to state that thirty dollars will cover the whole cost (including mattresses); and, in this connection, it should be recollected, that the *same* apparatus is adapted to patients of every size, and to fractures of either thigh, and, also, that it is not liable to get out of order. If the counter-extending pads become worn, they are easily renewed. The bed, being composed of separate mattresses, affords an opportunity for the frequent changing of sheets without disturbing the patient, and cleanliness, as well as comfort, is still farther promoted by the space provided for defecation. The ordinary shovel-nosed bed-pan is not required, but any convenient vessel of suitable size and depth may be used to receive the fæces. The rectangular wooden slide and short splint upon that side of the pelvis corresponding to the uninjured limb, may be temporarily removed, at any time, to enable the surgeon, or the nurse, the more readily to reach any part of the patient's body for examination, ablution, friction, application of liniments for the relief of pain, etc., etc. The counter-extending pad upon the uninjured side may also be temporarily removed, should occasion require, as the use of this pad is not essential—being designed only to distribute the pressure.

Earnestly desiring that this apparatus may be of some service in lessening the anxiety of surgeons, and in ministering to the comfort of the afflicted; and confidently believing that it will enable us, in many cases, to make a more favorable prognosis than we otherwise could, we send it forth upon its mission. Many of our first surgeons have seen it in use at Bellevue Hospital. We do not feel at liberty to quote their freely-expressed opinions; they will doubtless speak for themselves in due time. We are perfectly satisfied to subject it to the criticism of a liberal and high-minded profession.

By courtesy of the surgeons to Bellevue Hospital, the principles set forth in the foregoing remarks have been tested in that Institution; and, though the number of cases already treated is necessarily small, the results have been highly gratifying. Many distinguished surgeons, both native and

foreign, have seen the apparatus in use, and we have reason to believe it has, in every instance, created a favorable impression. Both nurses and patients testify to its convenience, and to the ease with which it is borne.

Case 1.—John Madden, æt. 30 years; admitted November 24, 1856, with simple oblique fracture of left femur; general health pretty good, although he had been previously considerably broken down by syphilis. He could not give a very intelligible account of the manner in which the accident occurred. We first saw the patient on the 3rd of December, when ether was administered by inhalation, and upon examination (the amount of tumefaction being still very great), the fracture was thought to be at, or near, the surgical neck. Subsequent examinations, however, showed it to be near the junction of the upper and middle thirds. There was considerable ecchymosis in the groin, resulting from the original injury; the limb was shortened an inch and an eighth. Assisted by Drs. Pope and Himes, resident surgeons, we applied our new apparatus, and left the patient very comfortable. On visiting him the next day, we found he had removed all the dressings, but could give no reason for having done so. We then learned, for the first time, that he was familiarly known by the title of "Luny John;" the dressings were replaced on Friday, December 5th, and the straps fastened by small padlocks. The patient, continuing refractory, kept the roller and splints of coaptation continually in a disordered condition; but, owing to the nature of the apparatus, he could not disturb the fragments of the broken bone, nor by any motion of his trunk or pelvis shorten the injured limb. The counter-extending straps first used, being insufficiently padded, caused some uneasiness at the points of pressure, but no excoriation; these were replaced by others on the 13th of December; on the 3rd of January, 1857, five weeks and five days from the time of the accident, the apparatus and dressings were removed; excellent union had taken place; the limb is in perfect position, and quite as long as the other. If there be any difference it is a line or two longer, and this we conceive to be an advantage, as the pressure upon the cartilages (consequent upon using the limb which has been so long extended), and, also, the absorption and contraction of the callus during the process of complete ossification, must necessarily shorten the limb a little during the few months immediately succeeding the treatment. In this case, the arched form of the femur is perfectly preserved. John is at

work at Bellevue, and is proud to show his limb to any surgeon who wishes to examine it. We are confident that any one acquainted with the man, would say that no apparatus could be subjected to a severer test, or yield a better result. Gratifying as is this case, we would not leave the reader with the impression that such results are *generally* to be expected.

Case 2.—James Kloye, æt. 13 years, of good health and constitution; admitted January 9, 1857, with simple oblique fracture of right femur, at about the junction of the middle and lower thirds, caused by being run over by a carriage. Assisted by Dr. Himes, resident surgeon, we applied our apparatus, January 15—six days after the accident—the inflammation and swelling having in a great measure subsided. The limb was shortened an inch and a half. We gradually extended it to full length. The patient was perfectly comfortable during the whole course of treatment. The dressings were twice renewed, and finally removed five weeks and four days after the accident; union firm; position of foot natural; no perceptible shortening, except upon careful measurement, when a difference of half an inch may be detected. The adhesive plaster used in this case did not retain its place well, yet we have no reason to complain of the result.

Case 3.—Michael Connal, æt. 30 years, laborer; admitted March 5, 1857, with simple oblique fracture of right femur, near the middle of the shaft, and also with simple fracture of left tibia. These injuries were produced by the falling of a bank of earth. Dr. Himes, resident surgeon, applied our apparatus four days after the accident, and also a starch bandage to the fractured leg as soon as the swelling had sufficiently subsided. Before dressing, the right limb was an inch and a half shorter than the left, as nearly as could be determined, the points of measurement being less absolute when both limbs are fractured. This would have been an annoying case under any ordinary method of cure, owing to the difficulty of relieving the bowels without disturbing either limb. As it is, there is not a more comfortable patient in the wards, nor one more easily taken care of. He has now (April 9th) been under treatment five weeks, and the case promises an excellent result. Other cases are in progress and will be reported ere long.

ART. V.—*Induction of Premature Labor with the Douche.** By
GEORGE T. ELLIOT, Jr., M.D. Physician to Bellevue Hospital;
Corresponding Member of the Edinburgh Obstetrical Society.

MARY Donovan; Irish; primipara; æt. 30 years; attracted my observation, in the lying-in ward of Bellevue Hospital, by her deformity. She is four feet and a half high, strongly built, with broad shoulders and well-formed limbs. The spine presents a well-marked posterior curvature, involving the last six dorsal vertebræ, and probably the upper lumbar, forming an arc with a prominence of at least an inch; there is no lateral curvature, but the tumor is larger to the left of the spinous processes. Anteriorly, the sternum is decidedly bowed, rising abruptly outward from the ensiform cartilage; right chest well formed; three upper ribs on the left side convex at their articulations with the cartilages.

In conversation, I found her of a very low order of intelligence; and some of her statements were ascertained to be willfully false, obliging me to rely on my own examination for the truth of her condition. It was impossible to ascertain the exact date of her pregnancy, but she expected to be confined some time during April, and according to my observations in this hospital and in the Lying-in Asylum, patients are apt to exaggerate their claim on the charity, by antedating somewhat the period of their gestation.

Nor could a satisfactory history of the existing deformity be obtained. According to her statement, she has suffered for some years from epileptiform convulsions, though her tongue was never bitten; these convulsions have not recurred since her gestation; kidneys apparently not diseased. She remembers an attack of rheumatism, affecting the larger joints, lasting for some weeks, and accompanied with symptoms referred to the heart, though she had no medical care.

Examination of the chest gave marked pulsation in the supra-sternal fossa above the edge of sternum; dullness commencing in the third intercostal space, and extending directly downwards to the stomach; apex in sixth intercostal space, five inches from the mesian line; loud systolic murmur at the base, transmitted downwards in the mesian line, but scarcely audible at the apex; this murmur recognizable in the subclavians, not in the carotids; rhonchus anteriorly on the left side, with occasional coarse crepitus in the lateral region; right

* Vide, also, *New York Journal of Medicine*, for January, 1857.

chest normal; posteriorly, well-marked systolic murmur heard on the right side of the tumor, at the site of the posterior curvature.

Abdominal walls tense; long axis of uterus in the mesian line, but that organ decidedly anteverted, and not susceptible of replacement by position; when on her back, with the head unsupported by pillows, a line let fall from the umbilicus would pass through the symphysis pubis. It seemed to me that an inferior extremity could be detected at the fundus uteri; uterine souffle, well marked over the left iliac fossa, and with less distinctness on the opposite side. Fœtal heart not made out at that examination, but distinctly heard on the following day in the left lateral uterine region. Satisfactory examination of the pelvis rendered impossible, by the conduct of the patient, but certainly not deformed to any extent that would greatly interfere with labor; upper vaginal wall decidedly prolapsed; os much retroverted and high up; cervix admitting little finger; no presentation to be detected through the os, nor through the cervix.

Under these circumstances I deemed it advisable to induce labor with the warm water douche for the following reasons:

1. That the operation was in no wise dangerous.
2. That the want of space between the diaphragm and pelvis would exaggerate the existing anterior obliquity of the uterus, in direct ratio to the development of the fœtus.
3. That, although a primipara, entrance into the pelvis of the lesser ovoid of the uterus had already been prevented; the os much retroverted; and prolapse of the upper vaginal wall induced.
4. That, in my experience, these unfavorable circumstances in puerperal women, with such deformity, had greatly increased the danger to mother and child.
5. That these dangers were increased by disease of the heart.
6. That they were still further augmented by a most unfortunate tendency to pelvic cellulitis and to peritonitis in the lying-in wards of the hospital, not likely to be removed before the warm weather.
7. That the child was living, and fitted for extra-uterine life.

Consultation.—The patient was examined by Drs. J. T. Metcalfe, I. E. Taylor, and B. F. Barker. Dr. Metcalfe sanctioned the operation, and thought the heart complication of great importance; he suggested, as possible, that the murmur over

spinal curvature might be transmitted uterine souffle. On the 9th of April, however, the sound remained unaltered. Dr. Barker approved of immediate delivery, but preferred the sponge to the douche. Dr. Taylor recognized the dangers of the case, but preferred that gestation should not be interrupted.

Operation.—The patient consented to the operation, and at three P.M., March 22, 1857, I proceeded to apply the douche. I should have liked to employ the carbonic acid gas, but so much time was demanded in the operation, detailed by Scarzoni, as to make me unwilling to use it in the present instance; and long familiarity with the douche, in relaxing the rigid os uteri during labor, gave me personal confidence in the method that I felt in no other.

In the operation I was aided by Dr. J. Smith Dodge, Jr., one of the house physicians, then in charge of the lying-in ward, who gave the patient the most thorough and intelligent care. The instrument used was the ordinary enema syringe, with a piston and tube: and I directed the nozzle carefully, so that the stream passed against and within the os uteri; a matter rendered difficult by the retroversion of the os, and more so by the excessive apprehension and struggles of my patient, with whom reasoning and persuasion did not avail. After injecting about half a gallon, I stopped, in the hope that she might become more reasonable with time. Ten P.M.—Recommenced, when such were her insane struggles that I had her brought under the influence of chloroform, when about two gallons of warm water were injected to my satisfaction, and with appreciable effect; just after withdrawal of the instrument vomiting occurred, preceded by violent straining efforts, and immediately afterwards a gush of waters demonstrated rupture of the membranes.

March 23, seven A.M.—Patient has slept during the night, and offers much less resistance to the operation. About six quarts were injected; cervix thinner; vagina cool and relaxing. Two P.M.—Has had pains in loins and hypogastric regions, with short, but marked, intervals; vagina much relaxed; cervix very thin, dilated to about an inch in diameter, and dilatable. Five P.M.—The nurse summoned Dr. Dodge hastily, as she stated that “the waters had broken.” Dr. D. found her fully in labor; pains strong and regular; quiet now, and hopeful; os fully dilated, head fairly engaging in the pelvis; pulse 152, rising with strong expulsive efforts to 170, rather due, in Dr. Dodge’s opinion, to irritability of the diseased heart than to

general excitement. The head passed the perineum about nine P.M.; posterior fontanelle turning to left thigh; child made two efforts at respiration, when Dr. D. completed delivery with his finger in the axilla. The child was a male, apparently still-born, but revived with stimulus to the skin, with chloroform, and alternate plunging in hot and cold baths.

At this time I arrived, and continued the use of the same means, while Dr. D. attended to the placenta. Respiration became natural, and the child was wrapped up in warm cotton and blankets; weight, five pounds ten ounces; fully formed for extra-uterine life; *the frontal bone was depressed half an inch below the parietal*; within half an hour the placenta and membranes came away, and the uterus contracted firmly.

Result to Mother.—Pulse 150; skin soft; tongue moist; nervous system composed; slept some during the night. She has since made a good recovery. On examining her yesterday (April 9), I satisfied myself that the left side of the pelvis, opposite the cotyloid cavity, is narrowed by its approximation to the mesian line.

Fate of Child.—Its body became warm, though its uncovered face remained cool; four hours after birth it bled at the nose, lost about an ounce of blood, and died in twenty minutes without convulsions.

Post mortem, twelve hours after death.—Depression, already described, of frontal bone quite evident; extravasated blood beneath the arachnoid, at the posterior convex surface of right hemisphere; clot, the size of a gooseberry, in the posterior horn of each lateral ventricle, and a smaller one in the left optic thalamus; blood extravasated at the base of the brain.

REMARKS.—I feel satisfied, from the statements of Dr. Dodge (in whose bed-side skill I have entire confidence), that I should not have terminated the labor by version or with the forceps, from apprehension of additional risk to the child. For the manner in which the labor progressed, under the circumstances, was such as to warrant confidence in its viability.

Anterior Obliquity of the Uterus.—The anterior obliquity of the uterus, in Mary Donovan, is not to be confounded with that occurring in women whose abdominal walls have been relaxed by frequent child bearing; nor yet in those where originally lax fibre allows of great displacement. In those cases, position, pressure, and a bandage will generally suffice; and even where reposition can not readily be brought about

before discharge of the waters, one has a perfect right to expect that time and nature's efforts will dispense with obstetric aid.

I remember a remarkable case of this class, to which I was called by Dr. J. Trenor, jr., where, after escape of the waters, the os was so high up, and so retroverted to the left sacro iliac synchondrosis, that I could only reach it by introducing my hand; and yet, in this well-formed woman, time alone sufficed to bring the os into a more favorable position, and complete relaxation was brought about by the douche. But the case is far different with so robust a primipara as Mary Donovan, in whom the obliquity was a necessary consequence of the diminished space between the diaphragm and pelvis, and not to be relieved by position. In such deformity, obliquity is but a question of degree, as may be illustrated by these examples:—Dewees encountered excessive anterior obliquity “in a very small woman, with rather a contracted pelvis,” where, after hours of suffering, labor had to be terminated by version. Mauriceau's seventy-third observation, in the appendix to his edition of 1738, gives the details of a case where a dwarf, æt. 27 years, and only two feet and a half high, presented such anterior obliquity that her abdomen touched her knees; she died in labor undelivered.

Indeed, while these cases occur but seldom, it is especially to them that the criticism of Burns is applicable: “Davenport, who was both a candid and experienced man, has, perhaps, made the moderns too inattentive to obliquities of the womb by going to the other extreme.”

A somewhat analogous case.—Cases that I have seen, similar to the one narrated, have been apt to need assistance from art; and, perhaps, the notes of the following one, taken during the period of my residence in the Dublin Lying-in Hospital, will furnish an example of the difficulties to be apprehended:—

Charlotte Davis, æt. 30 years; admitted September 3, 1849, at ten A.M., into ward twelve, in labor with her first child; she has suffered from Pott's disease at the age of twelve, and several of her dorsal vertebræ are ankylosed. Her health is now good, indeed, robust; and her disposition very cheerful. No apparent deformity of the pelvis externally, nor can any diminution of the brim be recognized; the pubic arch, however, is somewhat sharp; first stage concluded at an early hour of the 5th, from which time the pains recurred constantly and with great force, but without advancing the head.

Four P.M.—Scalp tumor formed; head still at the brim; ordered a stimulating enema; pulsations of foetal heart could not be accurately ascertained. Nine P.M.—Somewhat weak and anxious; voice hoarse from shouting; scalp tumor increased; no advance in the head. Eleven P.M.—Head in the same position; Dr. Shekleton decided to introduce the forceps, though without much anticipation of success. Fontanelles and sutures had been obliterated for some hours; as was anticipated, traction with the forceps proved unavailing, when the head was lessened and withdrawn with the face anteriorly. When the patient left the hospital, which she did at the usual time, she was recommended to seek assistance at the seventh month of any ensuing pregnancy.

Now, I have no doubt, in looking back at this case, that the chief difficulty arose from anterior obliquity, for there was no disproportion of the superior strait, through which these strong expulsive efforts could not advance the head; and yet the direction of the posterior fontanelle (towards the right sacro iliac synchondrosis), the second in frequency ought not to have interfered with descent.

We may say with Mauriceau: "*celle qui est petite ou trapuë, ou contrefaite comme la bossuë, n' a pas la poitrine assez forte pour faire valoir ses douleurs et les pousser en bas.*"

Effect of Obliquity in Mary Donovan.—Certainly, what I apprehended chiefly with Mary Donovan was that the irremediable obliquity of the uterus would render the dip of the foetal head into the pelvic brim difficult, by transmitting the uterine force through the foetal spinal column against the upper part of the sacrum, where it would be met with resistance, in so direct a line as to need, perhaps, the assistance of art—certainly to protract the labor.

The correctness of this view appears to me to be demonstrated by the cause of the child's death, even under the favorable circumstances of its birth. On reviewing the case, it will be seen that the obstacle to the passage of the foetus could not have arisen from the cervix, for the os was fully dilated by the time that the expulsive efforts were called into play; and as the presentation was the most favorable (left occipito-anterior), it is certain that the depression of the frontal bone must have been occasioned by pressure against the posterior pelvic wall. It is evident that it could not have occurred before labor set in, for the head had not entered the pelvis as it so frequently does in primiparæ.

Again, the character of the sub-arachnoid effusion was

such as is so frequently met with in death of the foetus, after strong compressing force has been applied in the antero-posterior diameter. I have more than once seen such extravasation, at its most frequent site—posterior convex surface of hemispheres—after such an occurrence; the effusion into the ventricles is rare, while either that beneath the arachnoid, into the ventricles, or at the base, was a sufficient cause of death, and if occurring at full term, either with or without the use of instruments, would have made me regret that premature labor had not been induced.

It is, moreover, evident that labor deferred for another month would have increased the difficulty, for, in the words of Chailly, "*Le fœtus parvenu au terme de la gestation ne diffère de celui de huit mois que par ses dimensions.*" It will be seen at once that pressure on the frontal bone obstructed the flow of blood through the longitudinal sinus and its tributary vessels, opening as they do obliquely forward; a fact prominently brought forward by Dr. Radford, and used with advantage by Dr. Simpson, as an argument for version in deformity of the pelvic brim. As a further illustration of the diminished risk from lateral pressure, I may mention that I have seen, within a short time, a child, whom I delivered with long forceps some two years ago, after one parietal bone had been so indented by the promontory of the sacrum as to allow one finger to be laid therein; there is now no trace of the deformity, nor did any inconvenience result therefrom. In that case, my friend, Dr. Chas. E. Isaacs was present, and gave chloroform.*

Value of Douche further illustrated.—Mary Donovan's case adds another to the increasing list of those in whom the water douche has brought on labor, in a manner closely simulating the most fortunate efforts of nature, and avoiding some of the dangers to which she so often leaves her patients exposed.

Within a month, I have had three other cases, interesting from this point of view. In one, where the left hand presented through the unbroken membranes, dilatation of the os (preparatory to version) was completed by the douche in the happiest manner, without their rupture. In another, a lady pregnant for the second time, and arrived at term, had commencing labor pains, on the 27th of March, when the os

* Vide, *New York Medical Times*, for December, 1854, for a paper by the author on Injuries of the Head in Young Children.

dilated to the size of a half dollar, while, through the membranes, I could distinctly recognize the head well down in the superior strait, and presenting in the first position; when this had been accomplished the pains ceased, and no farther uterine action took place until the 6th of April, when the labor was completed, and this, notwithstanding that, on the 30th, the membranes ruptured, and as great a proportion of the waters came away as happened with Mary Donovan.

Now this is a class of cases familiar to all who practice midwifery, and thoroughly under the control of the douche. On the second day, I succinctly set before my patient her condition, and the means within my reach for producing her baby within a short space of time. But I did not sufficiently possess her confidence, and her fears were augmented by her fond desire that the present infant should supply the place of one lost from scarlatina.

Last night I delivered a primipara, æt. 33 years, with forceps, of a living male child, weighing more than eight pounds, in whom an undilatable os yielded pleasantly to the douche.

Nor are these the only cases wherein the douche is applicable. Cases occur, in the practice of men of honor and experience, wherein it may be desirable, for many reasons, that gestation should not exceed its necessary limits; and, whereas, it is certain that nature does not assign an invariable limit for the intra-uterine existence of the fœtus; it is also much more than probable that labor thus induced does not increase the danger to the mother or child, and may be confidently said to diminish the risk of delay from unyielding os or cervix.

In some of these cases of prolonged gestation in primiparæ, it is probable that employment of the douche, at the proper time, might greatly diminish the danger to mother and child. It has often occurred to me that it would have been beneficial in the case of a primipara, last August, in whom I believe that gestation was prolonged. The mother and child are doing well, but delivery could only be effected with long forceps, through the united efforts of Dr. Metcalfe and myself, and demanded the expenditure of all our strength; and I believe that the chief obstacle arose from the bulk of the boy, who weighed nearly thirteen pounds; although that difficulty was increased by the position of the head—the second of Nægele.

Moreover, in those cases of rigid os, where the waters have escaped, and the vagina is becoming hot and dry, the douche is doubly beneficial—dilating the womb while it relaxes and cools the vagina.

If the experience of others shall confirm the favorable views of the applications of this agent set forth in these articles,—based as they are on four years of careful trial—it is my conviction, that the first stage of labor will hereafter be divested of much anxiety and risk.

43 West Thirty-Second street.

ART. VI.—*Report of a Case in which the Sting of a Bee proved Fatal.* By NELSON NIVISON, M.D., of Tompkins Co., N. Y.

MR. A. E., the subject of the following sketch, was by occupation a farmer; of active habits; æt. about fifty years; of a bilious temperament; strong and muscular. August 8, 1856, while engaged in the apiary, was stung by a bee at the side of the neck. He was much accustomed to these accidents at this season of the year; they were usually followed by considerable swelling and local irritation, but constitutional symptoms, till now, had never attended them. The phenomenon connected with the accident in question had this peculiarity, the pain, though momentarily severe, was of short duration, *no swelling or discoloration followed*. This dissimilarity to former accidents attracted the patient's attention, but he was sure he could not have been deceived for he actually removed the sting with his fingers.

About two hours after the occurrence he began to experience a variety of unpleasant sensations, accompanied by slight nausea, which was followed, in an hour longer, by pretty free vomiting; this continued at intervals till I saw him, which was four hours later. I found him vomiting occasionally, and constantly complaining of a very disagreeable nausea. Breathing somewhat oppressed and sighing; his condition otherwise appeared to be normal.

His general health up to this time had been good. I was unable to discover any cause for the gastric derangement, other than the bee-sting. There was at this time not the least trace of local irritation in the part indicated by the patient. The situation being, however, in the vicinity of important vessels, it occurred to me that the poison had probably been speedily absorbed, or, perhaps, had directly entered the circulation, and thus at once account for the absence of local symptoms, and the presence of the constitutional disturbance.

I advised a free use of brandy and water, a mustard plaster to the epigastrium, and opiates to be freely used, in case the vomiting should continue.

August 9.—Being actively engaged, did not see the patient till afternoon, and was much chagrined to find that the nausea and vomiting had constantly grown worse since my last visit, and that, notwithstanding the opiates had been given, no sleep had been procured. During the night, a moderate diarrhoea had come on, which had now become quite troublesome. It was apparent at a glance that the case was becoming one of grave import. The countenance was shrunk, wan, and anxious. The pulse was yet natural in frequency, though it had lost much of its force and volume. The tongue was covered with a dirty white fur, pale, soft, and flabby. Had taken brandy frequently, but vomited it immediately, in fact, could retain nothing on the stomach. Ordered—a teaspoonful of laudanum every half-hour till it was returned. Renew the sinapism to the epigastrium. Nine o'clock P.M.—Has taken the laudanum as ordered, but continues to vomit. *R* Hyd. sub. mur. grs. xx., pulv. opii. grs. iv. Repeat this if the first is not returned.

August 10, six A.M.—Returned the calomel and opium; slept about three hours during the night; feels better; has vomited but two or three times since last visit. Ten A.M.—Bowels have moved quite freely, evidently the effect of the sub. muriate. Patient comparatively comfortable, though somewhat prostrated. Ordered—brandy freely, ammonia, and opium. Six P.M.—Bowels move occasionally, stools less consistent. Continue brandy and ammonia, and take hyd. cum. creta., grs. iv., pulv. opii. grs. ij, once in three hours till sleep is produced.

August 11.—Symptoms much as at last visit, except that there is nausea and occasional vomiting. No sleep, though opiates continued through the night. Twelve M.—Bowels quiet; vomiting much worse; skin moist, cool, and clammy. Add two grains quinia to each powder. Eight P.M.—All symptoms worse, great restlessness and jactitation; pulse feeble, otherwise natural; gave hyd. sub. mur. grs. ij, every two hours, opium, morphine, and brandy *ad libitum*. But though an enormous amount of opium was given, patient slept but an hour or two during the night.

August 12, six A.M.—Patient more quiet, but continues to vomit occasionally. Continue the treatment. Six P.M.—The opiates which were given freely through the day have measurably controlled the more violent symptoms. Omit the sub. mur. cret. opiates, and stimulants.

August 13.—No sleep during the night; continued jactita-

tion ; pulse had gone from 90 up to 120 during the night ; frequent discharges from the bowels ; continued nausea and occasional vomiting. Ordered—sulph. quinine and opium in large doses. Four P.M.—Remedies produced no apparent effect, symptoms all worse. The case was now truly alarming, and I summoned to my assistance my friend Dr. Henry Spence, of Yates Co. He advised a return to the alterative doses of the sub. mur. hyd., and continue the other remedies. These and various other expedients were faithfully tried, but notwithstanding all we could both do or suggest, the patient continued to sink and died on the following day. Six days from the commencement of the attack.

The above is an outline of this singular case, written from memory (the notes having been mislaid). It suggests the inquiry—Was this morbid train of symptoms with its unfortunate termination, really caused by the sting of the bee? My own impressions, received at the bedside of the patient, were strongly in favor of an affirmative answer to this interrogatory. In many of its features—which could be more easily appreciated than described, in the character of the evacuations, in the protracted wakefulness, and in its obstinate refusal to yield to any of the various means made use of, it differed essentially from any of the gastro-intestinal diseases peculiar to that season of the year.

The *modus operandi* of the poison I will not attempt to explain : but I think it not improbable, that had the danger been anticipated by a free and much *earlier* exhibition of powerful stimulants and anodynes, the melancholy results might have been averted.

ART. VII.—*A Case of Gangrene.* By J. HENRY CLARK, M.D., of Newark, N. J.

THE following case is, in many respects, very remarkable ; it has no parallel in the experience of our oldest practitioners. I have called it a case of gangrene, because of a prominent concluding symptom. I should be glad of an opinion, with regard to the name and character of the disease, from any whose experience or reading suggests an analogous case. I have very carefully noted every symptom, important and unimportant, in the order of its occurrence, that the reader might be able to form an opinion of the case, with nearly the facility of the observer, who sat at the bedside.

Case.—Squire Titus, a gentleman of Newark, in the business of cracker manufacturing, on a large scale, was the unfortunate subject; his time was mostly spent in the open air, in the course of his business engagements. He was twenty-eight years of age, tall, weighed two hundred pounds, countenance pale and puffy looking. To the ordinary observer he would be spoken of as the “picture of health.” For months past, although he uncomplainingly pursued his usual avocation, some days his extraordinary pallor arrested the attention of his business acquaintances, while, upon other days, his florid and flushed countenance gave him a noticeable appearance of vigorous health. I am now disposed to think that the fullness of countenance said to be sometimes apparent, and which I myself observed, was the result of bloating.

These are his antecedents, as far as I learned them from him:—He was very robust till the age of sixteen, since which he has frequently complained of illness, although none of these attacks were sufficiently severe to detain him from his ordinary business engagements. With regard to his ailments, they were of an anomalous character, but the causes were not evident, the prominent symptom being always “general debility.” I could find no evidence of scrofula in the history of his family, or among his antecedents; his family having all been very healthy, and there having been no indications of the kind in his personal history. I made careful inquiry into all the facts, because, from the first time that I saw him as a patient, I felt that there was something about his case that I did not comprehend. I could see no reason for the kind of symptoms of which he complained, nor of the *debility* to which he had long been subject, although still engaged in business. His pulse was rather feeble, if I remember accurately, and constitutionally slow.

Early in March of 1856, he was seized with earache, but had often suffered from the same cause before. He was somewhat deaf in the affected ear, the permanent effect of a previous affection of the organ.

March 22.—Mr. Titus called at my office complaining of pain in the ear previously affected, and in which there was some degree of deafness. Upon examination I found tenderness upon pressure, both before and behind the auricle, and upon the mastoid process. Patient represented the pain to be of the most agonizing description, constant and lancinating. From the appearance of the drum, the severe pain, the tenderness upon pressure, and upon the introduction of the

speculum, I regarded the case as one of inflammation of the external ear, with a disposition from the external to the internal ear. The pain was not less, notwithstanding a discharge had been established. The issue of the case disposes me to regard this pain as of the same character as that which afterward attacked the skin. The pain was in both cases of the same kind, and the effects of the abstraction of blood was much the same—relief in the first instance and metastasis afterwards. Ordered—three leeches under the mastoid process to be followed by a blister.

March 23.—My patient called in and reported himself very greatly relieved.

March 25.—Still more relieved—still some degree of pain continued. As the blister had healed, ordered Croton oil in order to keep up some degree of counter irritation.

March 26.—Doing well.

March 27.—Still further improved.

March 28.—Felt as well as usual, and proposed to resume his usual engagements.

March 29.—Was summoned to attend him at his residence, in Lombardy street; he had hitherto been an office patient. Found him suffering apparently from an attack of fever of a mixed character, such as is often met with at this season in Newark, especially in the vicinity in which my patient resided. The disease seemed disposed to assume the form of intermittent, still it was remittent in its character. Pulse 110; tongue not much coated; skin not very hot or dry; little thirst; bowels constipated; very great irritability of the stomach; and very intense headache. The latter was so pressing that he scarcely complained of any other symptom.

The stomach rejected every thing thrown into it, nor did the employment of all the anti-emetics in general use, seem in the least to mitigate this symptom. The use of chloroform in small doses, and ice, remedies which I seldom find ineffectual, were of no avail to relieve this distressing symptom. Gave calomel and morphia, in small doses, dry upon the tongue, and ordered mustard to the epigastrium. His bowels were unmoved, nor would the stomach retain any cathartic. Gave magnesia, but it was instantly rejected.

March 30.—This state of things continued with no improvement.

March 31, morning.—Tried the “fluid extract of senna,” and succeeded in procuring an evacuation, though the nausea continued. During the 31st, and the following day, a few

doses of chinoidine controlled the disease; the pulse fell to 80, and became pleasant and regular.

April 1.—At my morning visit, there was every indication of a speedy recovery; there was a clean tongue, clear countenance, bright eyes, and a cheerful *expectation* of resuming, very shortly, his accustomed engagements. Still there were some symptoms that were less desirable. Rising from his bed yesterday, and attempting to walk a few steps, he fell heavily to the floor, having apparently fainted. Inasmuch as he had never fainted before, this was an unpleasant symptom. He attempted to rise from his bed to-day with the same result; besides the headache continued with little mitigation. Afternoon—much the same as in the morning.

At my evening visit my attention was called to a red and excessively painful spot on the left elbow, which was attributed very naturally to the fall, I saw no reason to doubt but that was the cause. It was not a bright red, nor an erysipelatous redness, rather erythematous; it was entirely unaccompanied by swelling or any considerable tenderness on pressure. I am now certain that the character of this local difficulty is revealed by the subsequent history of the case; pulse natural. Ordered—tonics, nourishing food and rest, and regarded him improving, notwithstanding these somewhat unfavorable symptoms.

April 2.—Pulse natural, no pain in elbow; countenance improved; headache gone; patient was cheerful, and spoke of resuming his business. Ordered a more nourishing diet, told him to eat anything he pleased; directed the continuance of chinoidine and anti-periodic as a tonic. He appeared so well that I discontinued my evening visit.

April 3.—Found my patient suffering from an intense pain about the middle of the anterior portion of the tibia; pain of the same character as that at the elbow; seemed to be confined to a circumscribed spot; no redness or swelling apparent. The pain was intense; learned that it had commenced late in the afternoon of the day before; supposed that the symptom was occasioned by an attack of periostosis; not regarding it as in any way connected with the affection of the elbow, which was now fully relieved. Ordered—four leeches, which entirely relieved the pain, but produced *very great exhaustion*, then to me quite unaccountable, but which the issue of the case seems to explain. Afternoon.—Same kind of pain—sharp, lancinating, excruciating, was experienced on the *instep* of the same foot, with

some slight degree of redness and a little œdema. In view of the evident exhaustion produced by the leeches, did not apply more, but directed a blister and anodyne. Pulse regular; somewhat full; tongue clean; finding the symptoms embarrassing, and feeling unable to satisfy myself with regard to the diagnosis, asked a consultation, and it was agreed upon for the morning.

April 4, nine o'clock A.M.—Met Dr. Samuel H. Pennington; found the leg and foot considerably swollen; somewhat œdematous; some pitting on pressure; a rheumatic sort of redness of the large toe, of the first joint of the thumb, also, of both elbow joints, especially the one first affected; several other places, besides, were tender upon pressure; indeed, the whole body seemed to be in such condition, that pressure *almost anywhere* produced pain. There was no sore throat; nothing indicating the existence of scarlitina poison now, or at any previous time; pulse under 100, pleasant and full; tongue clean; no headache; complained of feeling weak; not otherwise ill; little pain anywhere if not touched. We decided to continue a free tonic course, as there was constipation and the appearance of inflammatory rheumatism; ordered a cathartic of Rochelle salts. The case, in our judgment, presented more of the symptoms of acute rheumatism than of any other disease. There was much obscurity about the case; we decided upon an expectant course, on the whole, and determined to watch closely, and await future developments.

Evening.—Symptoms not changed materially, except that the swelling in the leg had increased—it was more œdematous; observed some lowering of the temperature of the leg, which I attributed to the coldness of the room, and to the accident that the limb had been, for the most part, uncovered for several hours; I observed a slight discoloration, which I supposed might be attributable to the very great distension of the skin and the consequent prevention of the return of the venous blood; the tongue was clean; pulse slightly excited, but full; did not seem to indicate exhaustion; he had taken broths, soups, and quinine very freely; did not change the prescription which had been decided upon in consultation, except to order an anodyne.

April 5, nine o'clock A.M. —A terrible change had taken place; the leg was gangrenous and discolored, from the knee to the foot; the foot was blackened; the elbows, thumb, and several other parts of the body exhibited gangrenous discoloration; pulse 120, and feeble; countenance

anxious and distressed; tongue moist and clean. Dr. Pennington being engaged, sent for Dr. L. A. Smith; met Dr. Smith, with his son, Dr. E. D. G. Smith; we agreed to order stimulants, *ad libitum*, which were continued as long as the patient could swallow. Twelve o'clock, M.—Has sank rapidly since nine o'clock; he held up his hands, discolored by gangrene, and demanded the reason, and asked if it was a fatal symptom; his arms, legs, chest, indeed, every portion of the body exhibited the same gangrenous discoloration; mind perfectly clear; extremities of very low temperature, in spite of every method of applying artificial heat. Five o'clock.—Hiccup began; mind still clear. Seven o'clock.—Delirious; talked constantly to his horses; supposed himself holding the reins; had been very quiet all the P.M.; his cheerful chirrup to his horses, calling each by name, filled the house, and contrasted strongly with the weeping of his young wife and affectionate mother, who gathered about the bed, as the end evidently approached. About nine o'clock, his talking subsided into low muttering; his pulse was scarcely perceptible; the death-damp appeared, but he continued to breathe till ten o'clock, when he expired. His body was greatly discolored. The undertaker, a man of age and experience, says that he never saw such a corpse before, and remarked: "If he had lived a few hours longer he would have become as black as a negro."

To what category does this case belong? What was the cause? An unmitigated quack—who called in to him a few hours before his death, and told him that he had seen and cured many such cases, and could have cured him if he had seen him in time—had been, for some weeks, giving him mixtures and pills; could he have administered some poisonous compound? There is no reason to believe that he could have been poisoned by accident or design; his diet was the same as the rest of the family, which would serve to preclude the possibility that the cause is to be found in diseased beef or grain; there is nothing in his habits or antecedents to induce the suspicion that he purposely poisoned himself. It does not seem to answer to any of the descriptions of erysipelas.

It seems to the writer to belong to the same class as those cases that commence in one part of the body, with acute pain, and rapidly terminate in gangrene. It seems analogous to the "black plague" of the west. I have no experience which enables me to speculate with regard to the cause or the diagnosis.

NEW YORK PATHOLOGICAL SOCIETY.

REGULAR MEETING, March 11, 1857, DR. JAS. R. WOOD, *President*.(Reported by E. LEE JONES, M.D., *Secretary*.)

Varicocele—Operation.—DR. A.C. POST presented a portion of a scrotum, removed by him for varicocele, last Saturday. The operation performed, was that generally known as Astley Cooper's, modified by Dr. Watson, and consisted in the removal of all the pendulous portion, which could be drawn down by the testis. It is unattended with danger, provided proper care be taken to secure the bleeding vessels.

In reply to a question from the President, as to whether the testicles in such cases were ever left bare, and only covered by granulations, Dr. Post said, he had always been able to cover them. To one unaccustomed to the operation, or seeing it for the first time, it would appear, that too much integument had been removed; but, by a proper methodical arrangement of the sutures, all difficulty could be obviated.

DR. WOOD stated that he had frequently operated in this manner, and had never failed to cover the testicles readily. He had, however, seen a case operated upon by another person, where there was not sufficient integument left to cover the testicles.

Larynx and Trachea of a Suicide.—DR. FINNELL exhibited the larynx and trachea, with the blood vessels, obtained from a young woman, twenty years old, who was found dead in an entry way. Her throat was cut in two places. The first wound was four and a half inches in length, and the second, about an inch below, was four inches in length; both were transverse; the upper one was superficial, simply exposing the muscles; the lower was much deeper, and severed, completely, the carotid artery, and, partially, the jugular vein on the right side. The stomach merely presents that blanched appearance occasioned by the sudden loss of blood. The uterus is also blanched. The heart was firm, contracted, and perfectly empty. The larynx shows the division of the muscles on the right side. Both wounds were deepest at the right, as if the cuts were made from left to right.

DR. POST remarks, that the wounds of the throat seemed to be remarkable, inasmuch as the vessels were injured without penetrating the larynx or trachea; and, in such cases, it was far more common for the vessels to escape, even if the trachea was cut nearly through, and that it implied that the force was more lateral than is usually the case.

DR. MARKOE agreed with Dr. Post, as to the manner in which the wound was inflicted; that the instrument was pressed down with more force at the side of the trachea, where the vessels were wounded.

In answer to a question from Dr. Wood, as to how long the patient lived, Dr. Finnell stated, that he did not know.

DR. WOOD thought that recovery was more usual in cases of secondary hæmorrhage of the carotid, than from any other artery of equal magnitude, and instanced two cases illustrating this fact. One occurred in the son of a medical gentleman of this State, where the common carotid was tied by Dr. Hamilton; secondary hæmorrhage followed; com-

pression was employed, and he recovered. The other was a case operated upon by Dr Parker; hæmorrhage occurred a few days after, was arrested, and recovery took place. And in experiments that have been tried to arrest hæmorrhage from the carotid, it was found that certain styptics were successfully employed, and even in cases where this was not used, the hæmorrhage was arrested spontaneously in sheep and other animals. He had an idea, that the action of the larynx drew asunder the carotid artery, and, in this way, we have the artery retracting, contracting, the external and internal coagula are formed, and the hæmorrhage is arrested. He had often been asked in courts of justice, how long a person would live after division of the carotid artery; bearing on this, he mentioned the following:—A female in Grand street, the wife of a butcher, was stabbed by her husband at the street door; the artery was cut off; after the wound was inflicted, she walked through an entry way, and ascended a flight of stairs, which he thought would require some two minutes to accomplish; the wound was about an inch in length. In the Bond-street murder, the external carotid was completely severed, and the internal partially; the heart wound must have been received afterwards, inasmuch as there could be traced on the wall, by the door, jets of blood, in a semicircle, where he is supposed to have turned.

DR. FINNELL stated that, two years ago, a negro received a wound, on the sidewalk, in the neck, by a butcher's knife, the anterior innominate was severed, and he died instantly.

DR. ISAACS thought it would not be out of place, to relate a fact that came under his observation in the N. E. boundary of Maine. A horse had his femoral artery wounded by a sharp stake; he bled profusely, and died in two minutes. In another case, in a man, who had his femoral artery tied at Poupert's ligament for aneurism in the middle of the thigh; everything went on well till the eleventh day, when the ligature suddenly gave way; while the hæmorrhage was going on, a doctor was sent for, across the street, and arrived just in time to employ pressure, and save his life. Patient did very well afterwards, and there was no return of hæmorrhage.

Rib—Fracture—Ensheathing Callus.—DR. FINNELL presented a portion of a rib, that had been fractured. The reparative process has taken place, and the ensheathing callus (so called by Mr. Paget) has remained after the union of the bones. On sawing it across, the broken extremities of the bone are seen closed by a layer of compact bony structure, and around all this the ensheathing callus is formed. Mr. Paget had not seen this state of things in any of the ribs, but mentions a similar case as occurring in the clavicle.

DR. ISAACS had examined a thin section of the bone under the microscope, and observed the lacunæ and canaliculi in abundance; they were very well characterized indeed. He had seen no Haversian canals, but Dr. Gouley, who had made a very thin section, stated that he had seen it. He thought the specimen thus far, presented all the characteristics of true bone.

DR. MARKOE, in this connection, inquired whether it was the received

opinion that the reparative material was not converted into true bone. He did not refer to abnormal growths.

DR. WOOD, in reply, said that Van Biber, and others, held a contrary opinion to Mr. Paget. He thought it was equally well shown by others than Mr. Paget, that Haversian canals, etc., do not exist. And in the case under consideration, it would require great care in the examination, to determine positively that the characteristics of bony structure were present. It is possible, in this particular instance, from the lapse of twenty-five years, the material might be identical in its structure to bone proper. If there was no objections, he would like to continue the committee, and while upon this particular specimen, they could examine some others, and at some future time make a report in extenso.

Bright's Disease—Uræmia—Convulsions.—DR. T. M. MARKOE presented a specimen of Bright's disease, followed by uræmia and convulsions. The following is the history:—Louisa Byland, æt. 51 years, born in Sweden, a widow, having had one child, was admitted into the New York Hospital, for a simple ulcer of the right leg, which had existed three weeks. She had been in great destitution, been badly nourished, and her toes were frost-bitten; but at the time of coming in, which was March 7, she gave no indications of internal disease. The next morning, after having had the ulcer dressed, she had a rigor, lasting about half an hour, and followed by fever and sweating; after this, she went to sleep, and continued drowsy during the day, but could be easily awakened, and took some farinaceous food. Towards evening of the same day, she was seized with a convulsion, affecting the whole body, and both sides equally; there was loss of consciousness, and involuntary discharges from the bowels and bladder; the eyes were fixed; the pupils unchanged; the respiration labored, and attended with a hoarse gasping sound; there was no frothing at the mouth, nor any persistent rigidity of the muscles, the spasms being of a clonic character; the pulse was accelerated, rather full, but compressible; the skin of a natural feel. The convulsion lasted about five minutes, the patient then lying in an unconscious state, and breathing in the same manner, with coarse tracheal rales: after a half hour, she recovered from the profound stupor, but her mind was confused, and respiration stertorous; there was no paralysis present. These symptoms continued through the night and next day;—the pulse being about 100; the eyes having a vague unmeaning stare, the pupils unaffected. Deglutition could hardly be performed, the mental obscurity deepened into coma, the pulse grew more feeble, and the respiration more stertorous and labored, until, in about thirty hours from the time of the convulsion, she died. The treatment during the convulsion, consisted of the application of cold to the head, and sinapisms to the legs and epigastrium; afterwards, no active remedies were employed.

Autopsy, fifteen hours after death.—Subject rather plump; cadaveric rigidity present in moderate degree. Head:—The skull opened, the dura mater removed, and the brain exposed. A small quantity of serum flowed out, when the arachnoid cavity was opened, estimated at 3i; the superficial veins were turgid with blood, and the capillary

branches distinctly injected. The pia mater was slightly opaque, being raised from the surface of the brain by serous effusion, especially where it passed over the sulci; streaks of greater whiteness coursed along the borders of the larger veins, and some white patches, as if coagulable lymph were observed. The redness seemed to be greater on the posterior portion of the brain, no doubt owing to its dependent position, but with this exception, both hemispheres, and the base of the brain, were equally the seat of the injection and effusion. On slicing it, the tissue was found to be of natural consistence, and with no unusual vascularity. The ventricles contained a normal quantity of serum, and presented no morbid appearances. No blood clots, nor any softening could be found. Thorax:—The heart healthy, not containing clots, its tissue rather soft, and on the outside a rather abundant layer of fat, but no appearances of fatty degeneration; the valves were sufficient and pliable; it weighed 3xiij; the pericardium smooth and healthy; upon the right lung were found old pleuritic effusions of fibrin, covering nearly the whole surface, and binding it pretty closely to the walls of the chest; both lungs were of a dark color, crepitant and loaded with serum, which freely oozed from the bronchial tubes, when cut; no tubercles found, and no evidences of inflammation; this state of congestion existed through the whole of the lungs, and was not merely hypostatic. Abdomen:—The liver weighed four lbs.; was of a rather light color, its surface smooth, but somewhat mottled, there being spots of a light yellow color, and when a section was made through them, the color found to penetrate in some places to the depth of half an inch; when scraped with the knife, these spots did not afford any appearance of oil. The gall bladder was fully distended. The intestinal canal, the spleen, and pancreas, were not examined. The kidneys, which are herewith presented, bear evidences of serious disease; the right weighs 3iij, the left 3v.; the surface has a pale mottled aspect, spots of yellow intermingled with red, but the yellow color prevailing; the surface is also dotted with slight mammillated elevations; and when the capsule is torn off, which is done with considerable facility, the variegated hue, and the somewhat rough surface, are made more striking. On opening the kidneys, the section has a whitish yellow look, presenting the most marked appearance of fatty degeneration; the secreting and tubular portions seem to be blended together, the line of separation indistinct; although the cortical substance has undergone the greatest change, and the medullary part can, in some places, be readily distinguished. The pelvis of the right kidney has a natural appearance, while in that of the left, is some undue vascularity. In one of the calyces of this left kidney, is a body of about the consistence and color of hard faecal matter; it breaks down readily under the fingers, and is about half an inch in diameter. In the bladder was contained about 3vi of urine, of a pale amber color, and having numerous specks floating through it. At a boiling heat, a copious white curdy deposit was thrown down; and the same thing produced by the addition of nitric acid. The albuminous state of the urine, taken in connection with the pathological changes in the kidneys, clearly point to uræmic poisoning, as the cause of the cerebral affec-

tion and death. Of the patient's history, almost nothing is known; it is stated, that she has occasionally had rheumatism within four years, but no particulars can be obtained.

Hydrophobia.—DR. J. C. HUTCHISON exhibited the brain and portion of spinal cord of patient, who died of *hydrophobia*, illustrating the small amount of disease in those organs.—Michael M., æt. 18 years; milkman; Ireland; was admitted into the hospital, this day, Saturday, March 7th, at one P.M., with hydrophobia, and presented the following history:—He stated that on the 29th of last December, he caught a stray dog, for the purpose of obtaining a reward of one hundred dollars, which the owner had offered for his capture. The dog bit him on the thumb and forefinger of the left hand, when he let him go immediately. The wounds healed readily, and nothing particular was thought of the bite until the day before his admission.

For about a week before the development of the disease, unusual drowsiness was noticed; frequently dozing while milking the cows. Two days before the disease was pronounced, he had pain in the finger and thumb which were bitten, but the pain did not extend to the contiguous parts of the hand and arm.

On Thursday night, 5th instant, he was noticed to be restless, and had some trouble with his respiration. On the following day (Friday), he attended to his usual duties, but did not feel well, and during the night, a dread of water and difficulty, or irregularity of respiration having been noticed, he was left in a room alone, the family fearing to come near him. On Saturday morning, (7th,) he was first seen by a medical man, (Dr. Garrison,) who recognized the disease, and sent him to the hospital. He had paroxysms of spasm of the muscles of the chest, fauces, and back of the neck, producing a sensation of choking or oppression about the throat and chest. The breathing was embarrassed, interrupted with frequent sighs, or a peculiar kind of sobbing movement, producing a sense of impending suffocation. When the paroxysms subsided, his mind was calm and collected, so that he could answer questions intelligibly. Whenever he attempted to speak, however, spasm of the fauces is produced, so that words are uttered with difficulty. His respiration during the interval of repose, when no effort is made to speak, is about twenty, and quiet. The paroxysms are brought on by anything that suggests the idea of water; a proposition to have a bath produced them, and likewise the sight of water poured from a pitcher on the floor, at some distance from him; on seeing the nurse enter the room with a pitcher of water, and approach him, he was thrown into the most painful agitation, and convulsive spasms, and implored that it might not be brought to him. Anything which causes the slightest agitation of the air, such as spreading the bed clothes, opening the door, or the entrance of a person into the room, will excite the spasmodic phenomena. They sometimes arise without obvious cause.

Pupils dilated; no injection of the conjunctiva; no cephalalgia; pulse 96; skin cool and clammy. The scars produced by the bite present the usual appearance of a healthy cicatrized surface. There is no undue secretion of saliva.

The inhalation of chloroform was ordered, so as to keep him gently under its influence, the quantity to be increased, when the approach of a paroxysm is observed. Half-past four, P.M.—Sulph. ether was given by mistake, instead of chloroform; it has had no effect in diminishing the frequency or severity of the spasms; indeed, they are now almost continuous, and of greater severity. About two o'clock, before the exhibition of the ether was commenced, he vomited freely a greenish fluid, and has vomited frequently since; eyes injected, pupils dilated, profuse salivation, mind wandering. Chloroform was given by inhalation; he readily came under its influence, the spasms entirely subsiding. It was soon noticed, that the respirations were becoming slow, and he expired almost immediately, apparently by asthenia.

An examination of the brain and spinal marrow was made forty-three hours *post mortem*. A small clot of blood, evidently quite recent, was found at the upper portion of the left hemisphere of the cerebrum, between the arachnoid and pia mater. There was slight congestion of the medullary portion of the brain, and the sinuses of the dura mater were filled with blood. The cranial nerves, the meninges of the brain, the cerebellum, medulla oblongata, and the spinal marrow, with its coverings, presented a normal condition. The period of incubation in the above case, was seventy-four days; duration of prodromes about one week; duration of the disease about twenty hours.

Uterus and Appendages.—DR. J. C. DALTON exhibited the uterus of a healthy woman, presenting some points of interest respecting the process of menstruation. No history could be obtained, so we can not tell whether it had commenced or not. It appears to be a perfect specimen of an unimpregnated uterus, as the neck is long, and has a very slight dilatation; the external os is perfectly smooth, and appears to be but a dimple. The cervix is very nearly cylindrical, and very long in comparison to the body. In the cavity of the body there is a small quantity of bloody mucus, about the color and consistency of currant jelly. Opening the body, the appearances seem to show that menstruation is either just approaching, or it is at its termination; probably it has just begun, as there is no appearance of exfoliation. On scraping the mucous membrane, it is found to be smooth, and highly vascular, the vascularity most marked in the body. The ovaries present the following interesting appearance:—there is protrusion of one of the graaffian vesicles, which seems ready to burst; this is shown very handsomely on the left ovary on the posterior part of the organ. He presumes this is the graaffian vesicle that would have ruptured during the menstruation, which was about to commence. The concentration of vessels on the prominent part is quite distinct; on the other ovary can be seen the corpus luteum of the last menstruation; it shows the external appearance very well, it protrudes from the most convex edge of the ovary; and the remains of the rupture are seen; this probably was the corpus luteum of the last menstruation, about four weeks ago. Cutting through where the rupture seems to have been made, there will be found (he presumes) some remains of the original clot, as well as the corpus luteum itself. On inspection, it shows the

structure of a recent body of this kind, having a very dark coagulum in the middle, and a very thin bright yellow wall. From the appearance here presented there can be no question that it is about four weeks old, and that a new one is just about to commence.

Heart—Ductus Arteriosus just Consolidated—Foramen Ovale Patulous.—DR. DALTON then presented the heart of a healthy female child, æt. 1 year and 9 months, who died of acute meningitis. It shows the ductus arteriosus just consolidated in a rounded cord, and the foramen ovale pervious, by means of a very oblique perforation from the right side to the left.

Gun-shot Wound—Removal of Ball—Death from Hæmorrhage.—DR. WM. H. VAN BUREN presented two specimens from a patient who died at the New York Hospital, the result of a gun-shot wound, received a little more than a month ago. He was about eighteen years old, was shot in the neck, and brought to the hospital the next day. At the time of his entrance, there was an orifice at the root of the neck upon the right side, posteriorly, corresponding to the point where the bullet had entered, and upon the opposite side of the neck, a little anterior and above the point of entrance, there was a good deal of emphysematous crackling, where a hard mass was touched, which seemed to indicate the position of the bullet. The emphysema was considerable at his entrance, but afterwards disappeared; he spit up a certain amount of frothy blood; he had paralysis of that limb for some time after receiving the shot, he could not move it, but afterwards did so, though with some pain; had a great deal of difficulty in breathing, not easy to account for; and, also, more or less constant cough, but this was not sufficient to account for the difficulty in breathing. On examining his chest, around the base of the right lung there was a good deal of flatness, the air did not seem to enter fully; there were no physical signs which indicated pneumonia or wound of the lung, beyond simple flatness; on the left side of the chest there was nothing abnormal. On surveying his trunk, as he lay in bed, his breathing was almost entirely thoracic. This flatness of the chest, around the root of the right lung, on weighing all the circumstances of the case, was suspected to depend upon the liver rising higher than natural, and this, taken in connection with the absence of abdominal respiration, and the track of the bullet, led us to suspect lesion of the phrenic nerve; causing paralysis of diaphragm, and, as a consequence causing the liver to occupy itself farther up. The dyspnœa lasted for some four or five days, and afterwards gradually disappeared. It was also suspected that there was some lesion of the pneumogastric nerve, but the symptoms, however, disappeared about a week after his entrance. He continued to do well till the middle of the third week; all danger from hæmorrhage having past, it was considered safe to cut down for the bullet it was removed. The opening healed within a week afterwards. About the end of the third week, he was again seized with difficulty of breathing, attended with a sharp stitch in his side. On examination of his chest, it was made out that he probably had pleurisy, together with bronchitis. These continued, and were not controlled by treatment. There was an expectoration of pus, (this continued

more or less, from the very beginning,) of a strong odor, as if it was connected with a carious bone, and we suspected that the larynx might probably be in some way injured. About this time he was attacked with sudden hæmorrhage, from the orifice by which the bullet had entered. It was readily arrested by pressure, and recurred a few times afterwards, but not to any quantity. In the meantime there was difficulty of breathing, with evidence of disease of lung and pleurisy of the right side. These symptoms were accompanied by an increased pulse, and diminution of strength; when, rather suddenly, on the morning of the 7th inst., he was taken with coughing and gulping of blood, and within a minute after the house surgeon could get to the bedside, he died.

Post mortem.—A catheter was introduced into the track of the bullet, and it was found that it had passed through the scalenus posticus muscle, behind the large vessels of the neck. It had struck the transverse process of the fifth cervical vertebra, and ploughed into the body of that vertebra; the anterior branches of the cervical nerves had been more or less involved, accounting for the pain down the arm, and the temporary loss of motion; the sheath of the vessels was not injured; the pneumogastric nerve was untouched; at the transverse process of the fifth cervical there were several fragments of bone; the vertebral artery was divided, and its extremity presented a patulous appearance, characteristic of ulceration; the vertebral artery did not enter the foramen, but passed in front, where the bullet had passed. On investigating further into the mode in which this blood came from this wounded or ulcerated artery into the trachea and larynx, we found the following appearances:—the lungs, being examined, showed that the air passages were more or less filled with recently coagulated blood; there was, also, clots in the œsophagus and stomach. The mode in which the blood got from the artery into the œsophagus, stomach, and trachea was accounted for in this way: removing the trachea and the œsophagus, behind the latter, and between it and the bodies of the vertebræ, was found the cavity of a large abscess, which extended from the commencement of the œsophagus, and terminated opposite the body of the sixth dorsal vertebra. The cavity of the abscess communicated with the œsophagus by a minute ulcer opposite the second dorsal vertebra; the blood went into the abscess and through this opening into the œsophagus. Besides this, we found dry pleurisy, with pneumonia on the right side, confirming the diagnosis of Dr. T. F. Cock. With regard to the termination by sudden hæmorrhage, a month after the wound is received, it is worth while to investigate the manner in which it was brought about. This artery could hardly have been wounded at first, though it might be possible. Dr. Markoe thought that the ulceration of the artery was caused by contact with the fragments of bones, the blood then filled the abscess, and then, through the small ulcer, it passed into the œsophagus, and so into the stomach and trachea.

Dr. MARKOE, stated that during the progress of the case, there was dysphagia, which was more or less constant, particularly if any large substance was introduced into the œsophagus: six or eight days

before the hæmorrhage took place, pus was discharged through the mouth. This discharge of pus continued until the close. The abscess was three or four times the size of the trachea. He thought from the fact that the abscess being so near the posterior mediastinum, inflammation might extend to the pleura, and thus the occurrence of dry pleurisy be accounted for.

DR. WOOD, in connection with this, cited a case of osteoma of the right clavicle, the result of a fracture, which occurred in a relative some years ago. The physician who saw the case did not recognize the nature of the injury, he told him to put his arm in a sling and go about his business. When he saw him, he found a large deposit at the seat of the fracture; he had hiccup and dyspeptic symptoms, with great despondency, that is so common in dyspepsia. He came to him for surgical aid, and he proposed to excise the clavicle, but the patient was not willing, and, in the course of a week, he returned home; the symptoms continued, and was so distressing to him, that he committed suicide by hanging himself in his barn. There was pressure on the phrenic nerve, causing irritation, which gave rise to hiccup, etc. Pressure on the brachial plexus caused partial paralysis. He said he should have thought that, in Dr. Van Buren's case, there would have been some symptomatic disturbance of the diaphragm.

DR. VAN BUREN said that the phrenic nerve in his case, was not the seat of irritation, but the nervous supply was interfered with by division of one of its trunks; supposed this accounted for the symptoms that he had related.

Heart and Aorta.—DR. ELLIOT, jr., presented an instance of hypertrophy of the heart and sacculated aneurism of the descending aorta. Of one of the specimens (the heart) he stated he was only able to compile the history from some notes on the case in Dr. Draper's private note-book. Francis Jones; æt. 28 years; laborer; unmarried; entered Bellevue Hospital on the 4th. of February 1857; habits temperate; no evidences of syphilitic or rheumatic taint; neither the history, nor the evidences of phthisis; troubled with cough and hoarseness of voice, but neither hæmoptysis nor difficulty in swallowing.

Some six weeks before admission he suffered from pain in the back, and was annoyed by the necessity for frequent micturition, a symptom which became subsequently aggravated; in about three weeks afterwards, œdema of the face and palpitation of the heart came on; and, in the early part of February, the feet and legs began to swell; urine twice examined by Dr. Draper.

February 4.—Urine found to be albuminous, with copious precipitates of ammonia.

February 15.—No albumen; specific gravity, 1024.

When this man came under my observation, a few days before his death, he was extremely feeble, and obliged to be constantly propped up in bed; the right leg and foot were so greatly swollen, that Dr. Hardaway scarified them, and evacuated a great amount of fluid; the incisions were followed by a mild attack of erysipelas.

The following physical signs, were all that I could recognize, and were noted at the time by Dr. Hardaway:—No prominence of the

præcordial, or sternal regions; impulse heaving in character, not marked in force; beat of apex indeterminate, apparently in sixth intercostal space, half an inch to the left of nipple; marked epigastric pulsation; pulsation, evident to the touch, in the supra-sternal fossa above the sternum; on percussion, the dullness of the præcordial region was found to extend to about an inch and a half to the left of the nipple, and from the nipple to the ensiform cartilage; resonance normal over the upper sternal and intra-clavicular regions; well-marked systolic bruit over the epigastrium, decreasing in intensity towards the apex; auscultation elsewhere over heart unsatisfactory; the patient died during the night of the 7th, with much dyspnœa.

Post mortem.—Lungs healthy; no pleuritic adhesions; large amount of effusion into both pleural cavities; no evidences of pericarditis recent, or of long standing; from two to three ounces of fluid within the membrane; heart hypertrophied, weighing from nineteen to twenty ounces; aortic valves can not hold water; aorta much dilated, much pouched toward the valves, and a small commencing sacculated aneurism at commencement of descending aorta; aorta covered over with atheroma in its various stages; a portion free from calcareous deposit, displaying oil globules and granular matter beneath the lining membrane; aortic valves nearly healthy, with exception of one atheroma near free border, and insufficient from dilatation of the aorta; innominate enlarged; walls of heart thickened and hypertrophied, flabby, but not the subject of fatty degeneration; papillary muscles, etc., partaking of general hypertrophy; right and left auriculo-ventricular openings enlarged, but valves apparently healthy; no fluid in peritoneal cavity; liver enlarged, and evidently fatty as was demonstrated by the microscope; kidneys normal in size; capsule readily detached, under the microscope; tubes found filled with oil globules and granular matter; some epithelial cells likewise contain oil. Dr. Clark, who had the supervision of the case in February, he believed had noticed some points in the progress of the case that were not evident at the time he came under his notice.

DR. CLARK remarked that, in February, his attention was first called to the case, he was examined with some care, and, at that time, he persuaded himself that there was no aneurism; but, examining a little time after, there was evidently a tumor of some sort underneath the sternum, which was evinced from the dullness across the sternum, for a space of three inches and a half; whether it was aneurismal or not he remained doubtful. He did not dare to pronounce it aneurism from the symptoms he noticed at that time. It was then remarked that the heart and arteries were beating with unusual force; the pulsations in the carotids, particularly the right, were uncommonly strong. There was no aneurismal murmur; no evident pulsations over the sternum. The artery could not be reached behind the top of the sternum, yet, there was difficulty of breathing and evident pressure upon the trachea, as well as obstruction to the return of venous blood; these symptoms appear mostly to have subsided at a subsequent time, under the observation of Dr. Elliot. The solution may be found in the rather unusual dilatability of the aorta; it may now be noticed that it is

unusually distensible and elastic; as the force of the heart's action diminished, it was probable that the tumor diminished with it. Still the actual aneurism observed in the specimen, though not very large, must have left some unusual dullness.

Hip-Joint Disease.—DR. ELLIOT also exhibited a specimen of hip-joint disease, occurring in a boy, *æt.* 18 years, who died in the medical wards of Bellevue Hospital. He had hip-joint disease in early life, attended with considerable shortening of the left femur, with considerable motion; the shortening of the limb was about two inches; the position of the foot and leg was similar to the position in dislocation on the dorsum of the ilium; the capsule around the joint thickened, and the muscles were flabby and had undergone fatty degeneration; the skin around the trochanter bore evidence of the discharge of matter; the acetabulum filled up, and the head of the bone rests on the upper part of the acetabulum.

Cancerous Disease of Bladder and Prostate—Death from Hæmorrhage of Bladder.—DR. GURDON BUCK presented the kidneys and bladder from a person of whom he could only give a partial history. They were removed from a gentleman, *æt.* 57 years, who died within a fortnight from the immediate effects of hæmorrhage from the bladder. He enjoyed, ordinarily, very good health, and was rather of a vigorous constitution. He saw him in consultation on Tuesday, and he died the following Thursday. Had been consulted by him, perhaps nearly two years before, for some trouble about his bladder; sounded him, having some suspicions of stone, none, however, was found. For nearly eighteen months he was dependent upon the catheter to draw off his water; there was no pain in the region of the bladder, kidneys, or urethra, until within a few weeks preceding his death, when he caught cold in the ears, on a journey from Baltimore soon after the holidays. He complained of pain in his right kidney, for which he was cupped and his bladder; and for some months previous to that, there was present other remedies used, which in a great measure relieved him of that trouble. For nearly three weeks, he had constant hæmorrhage from occasionally small clots in his urine. On the Tuesday when he was seen, he was shown the chamber nearly filled with what had passed him during the night; it was a deep red-colored, bloody fluid, and when poured off, showed that it was uniformly reddened, without any floating clots in it. The nurse informed him that the urine was thus constantly discolored for at least a fortnight preceding his death. Upon examining the bladder per rectum, the whole region of the prostate was very hard and unyielding; it was uniformly enlarged without any unevenness or irregularity of surface, though the right lobe was a little more salient than the left. The introduction of a catheter gave no pain, nor did he ever experience any pain, either in the bladder or urethra, when a catheter was introduced, which was carried on for a whole year; he had no local pain, except in the region of the kidneys, and was enabled to keep about the house. After his first visit he became prostrated, and died on Thursday morning. The opinion arrived at was, that the bladder was the source of the hæmorrhage which he had regarded as depending upon the presence of a morbid

growth, probably cancerous; though, in this case, in the absence of pain, it differed from other cases of cancer of the bladder that had come under his observation.

Autopsy.—Examination restricted to the urinary organs. There were old adhesions fully organized, uniting together the intestines, chiefly the small. The right kidney somewhat larger than the normal size, the left considerably smaller and much shriveled; ureters were found to be adherent along their whole course, so much so that it was necessary to dissect them up; both ureters were considerably dilated without being thickened. Both kidneys, of natural color, were flabby and softened, in some portions to such a degree as to be almost pultaceous; the cavities of both were dilated, and contained some turbid urine. The whole bladder, except the summit, was found to be hypertrophied. On the mucous surface, around the orifices of the ureters, were small clusters of growths, somewhat prominent, of a creamy color, quite firm and solid to the touch; and at one point on the left side there was a bleb filled with a greenish fluid. Other deposits, of the same creamy color and firm consistence, were found imbedded in the coat of the bladder. The ureters were pervious. The muscular coat was everywhere hypertrophied, forming ridges and furrows. By an incision, the thickened indurated prostatic portion was found to be decidedly of a cancerous character, and, also, the growths observed on the mucous surface were of the same nature. The surfaces of the trigone and bas-fond were scattered over with ecchymotic patches. Dr. Clark had examined the kidneys microscopically, and would give to the society the results of that examination.

DR. CLARK remarked that the kidneys, softened as they were, had gained no new element, nor lost any. The microscope hardly revealed anything more than what appeared on examination with the naked eye. The cells were there, and appeared to be normal; so, also, with the fibres, which could be easily broken down; none of the results of inflammatory action were evident. He could tell no more after, than he could before, the microscopical examination. The prostate was pretty well filled with cancer of the cell variety; the cancerous deposits did not seem to reach far into the bladder; the hypertrophy seemed to have been produced by a vast increase of fibrous tissue; the cream-colored prominences he hesitated in pronouncing cancerous.

Sacculated Bladder.—The PRESIDENT exhibited a case of sacculated bladder, one of the sacs containing a calculus, and calculi of the prostate. William Brunner; æt. 53 years; single and dissipated; admitted February 9, 1857. About ten years since had gonorrhœa, which was relieved soon, but was followed by frequent desire to pass his urine. He had another attack five or six years ago, which persisted for a long time, and was followed by an attack of cystitis, which was treated in the New York Hospital. Since that time he has had to pass his urine frequently and with difficulty.

February 5.—Passed blood, and had much pain, which compelled him to give up his business.

February 9.—He entered the hospital with cystitis and retention of urine. A number six silver catheter was introduced without

difficulty, and a large quantity of pus was drawn off with the urine; the urine was albuminous, and contained granular casts. Subsequent to the introduction of the catheter the first time, he was able to pass a small quantity of urine with difficulty and pain. The seat of the stricture, which was not marked, was in the membranous portion of the urethra.

February 19.—The catheter was blackened upon introduction.

February 24.—The color of the urine, which was at first of a dark sherry, became of a dark smoky brown; it was offensive at first, but now, became extremely so. His condition was typhoid, and he sank rapidly, and died on the 27th of February.

Autopsy, forty-eight hours after death.—Rigor mortis well marked. The cranial cavity not opened. Thoracic cavity:—Tubercles were found in small masses, scattered through the apices of both lungs, and much emphysema at the apices and free margins of both. Abdominal cavity:—The kidneys were large and flabby; the left weighed eight ounces, the right twelve, and was mottled on a portion of its surface; the surface of both was rather pale. On section, there was no congestion to note; under the microscope the tubes were granular. The pelvis and ureters contained a considerable quantity of urine, especially the latter, which were distended, and their walls thickened and altered. The bladder was well above the pelvic brim, and filled, though the urine had been drawn off twice in the sixteen hours preceding death. The bladder occupied the pelvic cavity so completely that it was necessary to remove the pubic bones to take it out without injury. The rectum was shrunk and almost empty. The mucous membrane of the bladder was broken down, of a dark ash color, and, together with the urine, was extremely offensive. The bladder is divided into five sacs. The upper sac contained about ten ounces, and communicated with the middle sac by a circular opening about a half-inch in diameter, and a little to the left of the median line and in front; the wall of the upper sac is not much above normal thickness, but around the opening there is much thickening and induration; the wall of the middle sac is much thickened, and it is capable of containing from six to eight ounces; into it the four other sacs, the ureters, and the urethra open, and it is therefore the bladder proper. In the right wall, just without, and anteriorly to the opening of the ureter, are three circular openings, the largest of which, about a quarter of an inch in diameter, opened into a sac which protruded forward and laterally, and would contain about two and a half ounces. The other openings are smaller, and the sacs protrude but little. One of these sacs contains a calculus about the size and shape of a small almond. Just above these openings is a small cup-shaped depression, which seems to be the commencing stage of another sac. The prostate gland is atrophied, and is the seat of two irregular abscesses, with dark walls and surrounding induration. Among the contents were two prostatic calculi, one about the size of a mustard seed, the other about half the size of a small English pea; externally they are of a glistening bronze color. The renal calculus is composed

of the phosphate and carbonate of lime. Muscular fibres are wanting, except in the walls of the bladder proper.

Horse-Shoe Kidney—Calculi.—The PRESIDENT also presented a specimen taken from a subject by Mr. C. H. Osborne, in his private dissecting room. The history of the case, as far as disease of the kidney is concerned, he can not give, as the patient died of some other disease, and during the treatment there was no disease of the kidney recognized. Mr. Osborne, while examining the contents of the abdomen, discovered this beautiful specimen of a "horse-shoe kidney." The kidney on the right side is enormously enlarged: upon opening it, the ureter on that side is seen occluded. In the pelvis of the kidney there was a large quantity of pus, also, a small quarry of calculi, with processes extending up into the infundibuli of the kidney; they looked like stalactites hanging from the wall of a cave. The left kidney was normal.

DR. ISAACS examined the kidneys by the microscope, but they had been so long in alcohol, he could not express a decided opinion. He found some fatty cells in the dilated kidney, but none in the other. In regard to its granular character, from the fact of being in alcohol, he could form no judgment as to its value. He did not make an extensive examination, and expected to find uric acid, but did not succeed. Dr. Isaac's views were corroborated by Dr. Clark, who also examined it.

DR. VAN BUREN thought the kidney to be a specimen of that form called sacculated.

DR. WOOD observed that it did not present the appearance of a true sacculated kidney, inasmuch as there was no destruction of the organs forming the kidney. All the parts that went to make up the kidney were exaggerated; the infundibuli were larger than they should be, while in the sacculated kidney it loses its identity.

Regular Meeting, March 25, 1857.

Cancer Outside the Stomach.—DR. CLARK exhibited a stomach removed from a woman, æt. 54 years, who appeared to have, during her lifetime, cancer of that organ. On examination now, after death, it does not appear to have been, strictly speaking, cancer of the stomach; the cancer is situated on the outside, but produces symptoms of cancer of the pylorus. The lady enjoyed good health until about a year ago, when she began to feel some dyspeptic symptoms, and, occasionally, would vomit her food with a certain amount of ropy mucus. This was not constant. These dyspeptic symptoms gradually increased, but were not so severe as to induce her to call a physician for some time. For three months before her death, the symptoms became more urgent, vomiting more frequent, when Dr. Gunn was called to see her. He discovered a tumor, of considerable size, to the left of the epigastrium, and somewhat below the usual position of the pylorus; and noted that vomiting occurred at a certain time after eating. She gradually lost flesh, and up to this period (three months before death) she was able to keep about the house; now she became too weak to do this, and spent some hours upon the bed. A month and a half after that, the Doctor invited him to see her; she was thin, and a little cedema-

tous about the feet, with a dingy look of the skin, but no appearance of jaundice in the coats of the eye. Her chief complaint was vomiting soon after eating, and a certain amount of pain in the epigastric region. She had had a great deal of pain just below the inferior angle of the left scapula, with pain, also, nearly throughout the whole of that side; but the prominent symptoms were weakness and vomiting. At this time, there was nothing remarkable in the material vomited; some ropy mucus with the food; but, two days after that, she vomited this fluid in the vial, which, at the time it was brought to him, had almost exactly the appearance of the black vomit of yellow fever, it has become a little mouldy, and is somewhat changed, but even now, the resemblance is striking. Under the microscope it was found to be composed of the gastric cells, dark brown hematoidine in its various forms, together with the fluid materials of the stomach. Her history from that time on he has not obtained, inasmuch as he has not seen Dr. Gunn, who was kind enough to send the specimen. Probably the same continued to be vomited from that time to her death.

Post mortem.—Here is a part of the stomach itself; it is not very much diseased; the coats are in a slight degree thickened with fibrinous infiltration; but behind are numerous cancerous masses, that have the color and appearance of adipose tumors, but, examined carefully, are seen to be cancerous; outside is a little sowing of cancerous grains, with quite a disposition to vascularity; but the chief thing is, that the tumor appears here compound, and then, contrary to our expectation, it is not, strictly speaking, cancer of the stomach; but is so situated as to crowd the pylorus against the wall of the abdomen, and so interfere with the passage of the food. There were numerous little ulcers in the stomach, which probably was the source of the hæmorrhage; these ulcers, together with the thickened condition of the mucous membrane, was, perhaps, the result of the materials being retained in the stomach over long. There was no cancer of the mucous membrane, strictly speaking. One point more in the case:—This secretion on the mucous membrane, besides being made up of the usual viscid mucoid matter that is found after death in most stomachs, is pretty well loaded with the sugar vegetable, the torulæ; portions of it contain a very considerable quantity of the torulæ. The material that was sent him, vomited, perhaps, a month and a half ago, did not contain it, but it likely does now, from the appearance of the vegetable upon the top of it; if not, it is the pencil-like appearance that is common upon fluids containing albuminous matter. The fact that in the secretions of the stomach there was found a considerable quantity of that particular cryptogam, will, perhaps, be made somewhat more interesting by reference to this specimen of fluid, the material vomited by another patient having cancer of the pylorus, this latter contained an almost boundless quantity immediately after being vomited. The whole, or very nearly the whole, of this sedimentary matter is of that character; its color is of a brownish hue, and that arises from exactly the same material that gives the deeper brown to the other specimen; from the hematoidine, showing an escape of blood into the stomach from some cause or other. The occurrence of the torulæ in these two specimens

was of interest to him ; inasmuch as he was not aware that it had attracted the attention of the profession. It is well known to the members of the society, that this plant is produced only in fluids that contain grape sugar ; in these instances the quantity, particularly in the last, is surprising, the acid fermentation was going on before it was removed, from the odor that was obvious at the time. There was the odor of yeast present in the last specimen, and from that fact he supposed that torulæ existed.

Dr. J. R. Wood, in connection with these cases, referred to that of a gentleman, æt. 40 years, who had suffered some ten years from dyspepsia. He saw him in consultation with Drs. Minor and Cheeseman, shortly before death. He had every symptom of cancer of the stomach, and it was diagnosed so by the physicians ; had, also, the cancerous cachexia and vomiting, as in Dr. Clark's case ; but there was no cancer of the organ, although it was situated behind, and adhering to, the stomach. The tumor in this case was felt, and it seemed to give positive proof as to the correctness of the diagnosis.

He saw another case of a lady who, during the past winter, had hemiplegia, she was treated for some months in Pennsylvania, and then in this city, and came under his charge for dyspepsia. The paralysis was in a good degree relieved, the symptoms were those of cancer of stomach. She had vomiting at a certain period after eating and became very much emaciated. The vomiting was so annoying that she really wished and prayed for death. In fact, for four weeks, food would remain on her stomach not longer than five minutes at a time, She was nourished by injections for four weeks before she died. On examination after death, no cancer of the stomach was found, but there was cancerous disease of the distal portion of the pancreas. There was an interesting case of a prominent man of this city, that came under the observation of Drs. Clark, Johnson, and himself. For some dozen years he had symptoms of dyspepsia, constipation, indigestion, and eructations after eating, with more or less pain in the stomach, usually relieved by diarrhœa. About three months ago, he examined him, and diagnosed the case as one of cancer of the stomach, or cancer of the liver. He had vomiting, but it was not violent ; there was more or less tenderness to the right of the pylorus, with dullness at that point. He communicated his opinion to his friends, and a consultation was called for. Drs. Clark and Johnson saw the case. So slight were the symptoms of cancer, so far as the vomiting at that time was concerned, that the gentlemen were inclined to think that he was mistaken. The sequel proved that there was not only cancer of the pylorus, but, also, of the great curvature of the stomach. Dr. Clark, who saw the case early, felt the tumefaction ; from day to day this swelling became softer, until at last, it could hardly be felt. The *post mortem* revealed cancer in the third stage, in the position as mentioned. The remedy that appeared to control the vomiting and sickness of the stomach was the hypo-sulphite of soda ; it was relieved from the moment it was taken until just before death. It was suggested by Dr. Clark, who has used it in other cases with marked results. The mode of administration was four grains to 3i of water, three times a-day.

PROF. CLARK remarked that he and Dr. McCready administered this remedy to a physician from the West Indies, who was afflicted with distressing vomiting, and its effects were very pleasing. It was for a disease of the mucous membrane, caused by the presence of the sarcinæ ventriculi; it was the discovery of this that suggested the use of the remedy. He mentioned another case of vomiting in which no cancer of stomach was present, where there was no good arising from its use; and, also, in another case, attended with vomiting of blood, it had no control over the vomiting, but after the first dose there was no more blood discharged. Concerning the errors of diagnosis in cancer of the stomach, it must have been the lot of most physicians to encounter such cases, and he could recall two or three persons at least, now enjoying excellent health, who were supposed by him to have cancer of stomach years ago.

Heart—Lung—Effect of Gun-shot Wound.—Dr FINNELL exhibited a specimen showing the effect of a gun-shot wound, consisting of the heart, a portion of one lung, and a portion of integument, of a young man, æt. about 22 years, who was shot about eight or ten days ago. The bullet entered between the third and fourth rib, passed across the base of the heart, carried a piece out of the pulmonary artery, and went through the left auricle. The ball was not found, though a careful search was made for more than an hour. In the pleural cavity of the left side, there was a large quantity of coagulated blood. The lung shows the perforation in its tissue: the wound in the lung is much larger than that in the integument. He died instantly.

Tubercles in a Monkey.—Dr. PETERS exhibited the lungs, liver, spleen, and portion of the mesentery of a monkey which was brought from the coast of Africa last week. On making the post mortem, this condition of things was revealed:—The left lung was tubercular throughout its whole extent, firmly adherent; congestion was found in the other lung, with tubercular matter throughout its substance; the liver is tuberculous; the mesentery, also, gives evidence of tuberculous deposit. The spleen, when removed, presented a beautiful appearance.

Hip-Joint Disease at Fourth Month—Death from Hydrocephalus.—DR. WILLIAM H. VAN BUREN exhibited the head, neck, and part of the shaft of the two femoral bones of a child, æt. $2\frac{1}{2}$ years, who died (in the fourth month of hip-joint disease) from acute hydrocephalus. It was interesting from the fact that it was rather rare to encounter a case at this point in its progress. He attended the child in consultation, and when first seen, he learned that the little fellow, who was healthy up to that time, had been complaining for six weeks of symptoms of hip-joint disease; he was fretful, could not sleep at times, and appetite capricious; he would not stand upon the leg, nor use it, nor allow it to be touched. The symptoms came on rather suddenly, and for some time it was hardly thought probable that it was a disease of the joint. Leeches were applied behind the trochanter, but without benefit; the leeches were repeated, but the second application was not more favorable than the first; he was, also, treated with syr. iod. ferri. His bowels were generally costive, and his dejections of a dark color;

this was noticed to be the case by the physician whenever he administered a dose of calomel, and on the night after taking the calomel he invariably slept soundly ; in fact, this was the only remedy that seemed to be efficacious in producing sleep ; the dose was two grains. No relief following the second application of leeches, a seton was put behind the trochanter, but no good result followed ; the fluid ext. bark, with minute quantity of corrosive sublimate, was also administered, but this did no good ; cod liver oil was then ordered, but with the same result. Finally, one day, the symptoms of arachnitis began to show themselves, and he died four or five days after.

Post-mortem.—Head :—There was thickening of the arachnoid membrane ; at the base, some patches of flaky pus ; there was an undue quantity of fluid here as well as in the ventricles ; the fornix was softened, and presented a watery, soaked appearance. Hip joint :—On dissecting off the muscles, there was pus in the bursa, between the tendon of the gluteus maximus and trochanter, not connected with the joint ; on the internal aspect, toward the obturator foramen, there was a point where the capsular ligament was lacerated, and pus escaped in the surrounding cellular tissue ; in the cavity of the joint, the synovial membrane was thickened, and an increase of vascularity ; the head of the bone was irregular in shape ; the round ligament was so soft that a slight movement of the bone broke it ; there were numerous soft patches on the cartilage of incrustation. The heads of both bones were removed, so that the general appearance could be contrasted.

PROF. CLARK inquired whether the disease began in the bone structure, synovial membrane, or in the cartilage ?

DR. VAN BUREN thought it commenced in the synovial membrane, though he could not say positively, as he has not sawn the bone through. On looking at the section of the femur on that side, the bony structure is more rarified, as if from atrophy ; possibly it was owing to the want of use.

PROF. CLARK asked if there were any tubercles in the lungs ?

DR. VAN BUREN :—The lungs were not examined ; it presented itself to him as a case of synovitis, in which the arachnoid became the seat of disease, in consequence of the similarity of tissue.

DR. AYRES said that he had taken the liberty of passing the blade of a small knife through the head of the diseased bone. It passed readily through the cancellated structure, and it was quite soft, while in the sound bone, after passing through the cartilage, it was immediately resisted.

Stricture of Urethra—Perineal Section—Uramia—Prostatic Abscess.—DR. ISAACS presented an instance of urethral stricture—prostatic abscess—perineal section—disease of bladder and kidneys. About three weeks ago, he was called to a patient who had been afflicted with stricture for about ten or twelve years ; found him with a swelling corresponding to the course of the urethra behind the scrotum ; it was large, tense, and hot ; there was no sign of fluctuation. Chloroform was administered, and an incision made into the perineum, until he arrived at an abscess, which was evacuated together with a little urine ; he was much relieved by the operation. Nothing particular occurred that

day, except that he made urine, toward night, through the wound. The patient continued to pass his urine in this way, partly through the urethra, and partly through the wound for about three days; was advised to submit to the perineal section, and after much hesitation, consented. Assisted by Dr. G. Buck, the operation was performed (the patient being under the influence of chloroform) by introducing a silver catheter down to the stricture. The incision was made upon the catheter, and after that was laid bare, a probe was passed through the stricture; then a director was passed and the stricture divided. A catheter was then passed into the bladder with difficulty.

The first incision was made on Saturday, but the operation was performed on Tuesday. He did very well after the operation, but in the evening, was very cross and irritable, and could not sleep. When seen in the morning, he was asleep; about three o'clock found him insensible, and it was very difficult to arouse him; he had symptoms of uræmia; suffering from partial suppression, some urine passed through the wound, and a very little through the catheter. This state of things continued until the evening, when the catheter was withdrawn, and cups and sinapisms were applied, but did no good; he continued in this condition until three or four in the morning, when he died.

Post mortem.—The kidneys were reduced to about half their natural size; the ureters very much dilated; and there was an abscess in each lobe of the prostate. The ureters were so large that, when blown up, they looked like small intestines; the bladder is three or four times thicker than natural. Pressing upon the prostate gland, pus came through the ducts.

The seat of the stricture seemed to be in the spongy portion of the urethra; one kidney was examined by the microscope, and it was found to consist of but very little healthy structure, or a thin section; where there ought to have been fifteen or twenty malpighian bodies, he could only find two or three, and only four tubes, and these were very much broken down. The malpighian bodies were very much altered in structure, and the walls of the tufts were much thickened, and a portion of it seemed to be wanting; the tubes were, also, filled with epithelial debris. It seemed astonishing that life could be prolonged so long with this state of things; the urine was tested, and contained albumen.

Spleen.—Dr. AYRES presented a spleen taken from a gentleman, 41 years of age, who died, he presumed, from a disease entirely disconnected with it; he was a very large and heavy man, six feet and three inches high. Three years ago, in riding, he was thrown from a wagon, and struck his left side against a stone wall; he had concussion, with vomiting of blood in copious quantity; he was brought home, and from that day he never was well. The symptoms developed were those of tuberculous disease, attended with repeated attacks of congestion of the lungs, pleurisy, and hæmorrhage, from time to time, together with copious expectoration; there was a large cavity at the apex of the left lung, and the whole lower portion was studded with miliary tubercles. The spleen, by its superior surface, was firmly connected with the lower surface of the diaphragm, and upon it is a copious exudation of fibrine, through which he made a section; it is exceedingly firm, and cuts

and feels like cartilage; the spleen was likewise attached to neighboring organs below, by bands of fibrine; the internal edge was attached to the left lobe of the liver. He thought that this hæmorrhage at the time of the accident, might have been occasioned by rupture of spleen, and so blood escaped into the stomach, which was firmly attached to it; the heart was large and fatty; the liver granular and enlarged.

NEW YORK ACADEMY OF MEDICINE.

REGULAR MEETING, APRIL 4, 1857, DR. MOTT, *President*.

ANATOMY OF THE PLEURA.

DR. CHARLES E. ISAACS, Demonstrator of Anatomy in the University Medical College, read an instructive paper on the Anatomy of the Pleura.

The object of this investigation was to determine the extent of the pleura above the clavicle, and its relations to important organs. Writers on anatomy either do not allude to the subject, or speak so vaguely, as to convey the impression that no definite knowledge exists in regard to it. Horner says the pleura extends higher at the head of the first rib than at its anterior extremity; according to Cruveilhier, the pleura projects more or less above that rib; Sharpey and Quain state that it extends an inch, or even an inch and a half, above the first rib. Harrison says when the lung is distended, the pleura may rise two inches above the first rib, etc., etc.

The statements of many other authors are given, all of which are equally indefinite, while in such works as the *Encyclopedia of Anatomy, Bourgerie and Jacob, Sibson's Medical Anatomy*, etc., no mention whatever is made of the extent of the pleura above the clavicle.

Struck with the discrepancies on this subject among authors, and aware from repeated dissections of the great height to which the pleura sometimes extends, DR. ISAACS was led to the careful examination of a large number of cadavers (one hundred in all), to determine, if possible, the superior boundaries of this investing membrane.

The method pursued was, to place the subject upon a firm table, and after exposing the thoracic cavity in the usual manner, by the introduction of one hand into the cul-de-sac formed by the pleura above the clavicle, its boundaries could be readily ascertained externally. Where this method failed, needles were passed from without inwards, at points where it was desired to obtain measurements, and their position in the cavity determined, by the fingers introduced internally.

It was sought to establish the following points:—

1. The height of the sternal edge of the pleura above the clavicle.
2. The height of its central portion.
3. The height of its outer edge.
4. The distance of the sternal edge from the median line.
5. The distance of the outer edge from the median line.

In prosecuting this examination, it was discovered that the upper part of the pleural cavity did not always present a dome-shaped form, as described by anatomists, but that it sometimes forms cul-de-sacs, extending upward like the fingers of a glove; they are sometimes prolonged laterally, from the right pleura across the median line to the left side, and pass upwards between the bodies of the cervical vertebræ and œsophagus, or, between the latter and the trachea.

DR. ISAACS presented several tables exhibiting the results of his investigations, of which we notice the following:—

Comparative height and width of the pleura above the clavicle in the male and female, calculated from the measurements in forty-seven males and forty-seven females. The conclusions at which he arrives are, that the pleura is both higher above the clavicle, and wider in that situation, in the male than it is in the female.

The high extent of the pleura.—In one hundred cases, the pleura of the right side rose *two inches and upwards* above the clavicle in fourteen; on the left in four; on both sides in five; in all twenty-three, giving the proportion of nearly one in four having a high extent of pleura.

Low extent of the pleura.—In five of the one hundred cases, the pleura did not rise above the superior margin of the clavicle; being one in twenty having a low extent of pleura. The sternal or inner edge of the pleura on the right side extended across and to the left of the median line in eleven cases, the greatest extent being one and one-fourth inches.

These eleven cases necessarily gave the widest extent of pleura at its superior part, the average width being four inches. It is worthy of note that this projection of the pleura across the median line was never observed on the left side.

It was, also, generally noticed that, where the pleura extended high, the subject had a long neck, and the reverse was the case in short, and especially bull-necked, subjects; in twelve cases marked as having long necks, ten had a high extent of pleura; in eleven short-necked subjects, the pleura was very low in three, below the average in eight. By the shape of the neck, therefore, and probably by auscultation and percussion, it may be possible to determine pretty accurately in the living subject whether the pleura has a high or low extent.

The practical importance of this determination of the limits of the superior portion of the pleura are obvious. To the physician, it is important to know these facts in the practice of auscultation and percussion, and in the diagnosis of diseases of the apex and the lungs. To the surgeon, this knowledge is of great value in the removal of tumors, and in other operations about the neck.

DR. ISAACS ingeniously suggests that cases of sudden death during operations about the lower part of the neck, from the supposed entrance of air into the veins, may be due to the opening of the pleural cavity. If the surgeon penetrated the neck two inches above the clavicle, it would have been thought that there was no danger of wounding the pleura, and yet the result of these measurements show that the pleural cavity could be opened at this height. These facts

are, also, important in the prognosis and treatment of wounds in the neck.

In the second portion of his paper, Dr. Isaacs considers the surgical anatomy of the upper portion of the pleural sac, or its relation with the subclavian artery.

In its first division, or that portion of the artery lying within the scaleni muscles, the subclavian always rests upon the pleura. The artery has never been successfully ligatured at this point, though the operation has been performed nine times upon the right side, and once upon the left. The failure is due to the extension of the disease to the coats of the subclavian, and the proximity of the ligature to important anastomosing branches.

The second portion of the artery, or that lying between the scaleni, is, also, always in contact with the pleura. The ligature has been successfully applied at this point.

The third division, extending from the scaleni to the first rib, is that portion of the artery which is most frequently ligated, and is, therefore, relatively, of the most importance, although the subclavian in this part of its course does not rest upon the pleura, yet, when the pleura rises high in the neck, it carries the artery with it; in the twenty-three cases in which the pleura rose high in the neck, the artery was high in the third portion of its course, and rested upon the pleura for a considerable extent, several examples are given to illustrate this fact. A knowledge of this relation of the pleura to the subclavian artery at the point where it is most frequently ligated, is of great importance to the surgeon.

This interesting paper will soon appear in the transactions of the Academy.

PUERPERAL FEVER.

On recommendation of the *Section on Obstetrics*, the subject of puerperal fever was brought up for discussion by DR. JOHN W. FRANCIS, Chairman of the Committee.

DR. FRANCIS said:—I find myself Chairman of the Committee on the subject of puerperal fever, and, thus appointed, am necessarily to open the discussion on that important disease. I shall do so with brevity, as I know not to what particular points the Academy purposes the investigation to be carried. This disorder is so minutely described and illustrated in books, that all who now hear me, must be familiar with its symptoms and its treatment. I have, therefore, little of novelty to announce. Its inflammatory character as a general fact, its rapid course in most instances, its great malignity under peculiar circumstances, are acknowledged truths. I will, on these accounts, as well as to save time, venture to affirm some things which, perhaps, may not be found in the pages of every author on puerperal fever. I am not willing that this disorder should be restricted in its seat, to inflammation of the peritoneal lining, thus nosologically denominating the disorder "puerperal peritonitis." The disease in many instances, involves the substance of the womb and the intestines, and even contiguous viscera. We are told the complaint often sets in several days after

the parturient condition is over. I have known it to assume the most malignant character within thirty-six hours after delivery, involving the womb, intestines, and even the bladder, and to terminate fatally with most disastrous destruction at the end of the third day. Upon examination, the autopsy has shown the womb contracted less than one-third of what it was in its full gravid state, its parietes, one and a quarter, or one and a-half inches in thickness, the inner lining overloaded with flocculi. This condition has been brought about from a variety of causes, all leading to a depressed condition of the patients a bad habit, vitiated air, and the concurring causes which bring on the typhoid form of this fever. I am satisfied of its contagious nature, from the authority of Gordon, and from what I have seen both abroad and at home. I will not trespass by the detail of circumstances in support of this view, at this time. I hardly think, a member of the Academy of five years' practice is among us, who has not seen this truth verified in hospital practice, perhaps, too, in the occurrence of puerperal fever in its sporadic form. In this age, when contagion is by many discarded as a cause of disease even in scarlet fever, and in measles, we must expect that such incredulity would reject its influence even in the Lying-in Hospital. I will add no more at present, but wait upon the discussion, for I apprehend that it is especially on this controverted subject of the specific character and contagious quality of puerperal fever, that the arguments of members will be expended.

PROF. JOSEPH M. SMITH, read an elaborately written paper, on the *Causes and Modes of Propagation of Puerperal Fever*.

The views of medical writers are divided as to the pathology of puerperal fever; one class holding to the opinion that the disease is an idiopathic fever *sui generis*; and the other that it is essentially a local inflammation, taking the form of peritonitis, metritis, metro-peritonitis, or uterine phlebitis; the former of these opinions have lately been revived, and, with the exception of imputing to the disease a specific contagious attribute, has received the support of able contributors to obstetric pathology.

The opinion of authors is also divided in regard to the nature of the morbid agent; one class contending that it is a specific contagious principle, elaborated within the body by a specific vital process; the other, that it is a miasm or poison, formed by the chemical reactions which take place in the exhalations, and other matters excreted or discharged from the human body, and retained in close apartments.

In rejecting the opinion that puerperal fever is a disease *sui generis*, we must, also, reject the idea of its propagation by a specific contagion. That the disease is communicable, there is no doubt; but it is so through the agency of a poison generated in a mode totally different from that peculiar to small-pox and measles.

PROF. SMITH, then proceeded to consider the *Special Etiology* of puerperal fever, under the following heads:

1. Causes of puerperal fever in public institutions.
2. Origin of sporadic or spontaneous puerperal fever.
3. The miasm of typhus fever produces puerperal fever

4. The miasm of puerperal fever produces typhus fever.
5. The miasm of erysipelatous patients produces puerperal fever.
6. The miasm of puerperal fever produces erysipelas.
7. The emanations from bodies, examined after death, produces puerperal fever.
8. Puerperal fever and erysipelas are generally concomitant epidemics.
9. Are puerperal fever, erysipelas, and typhus, one and the same disease?
10. Extreme susceptibility of puerperal women to the effects of idiomiasm.

The conclusion at which Prof. Smith arrived, after full consideration of the above propositions, are,

That puerperal fever sometimes arises from the noxious air generated from the foul discharges of puerperal women in crowded and ill-ventilated lying-in hospitals; sometimes from the emanations of patients laboring under typhus fever, erysipelas, and gangrenous diseases; sometimes from the emanations from the human body dissected after death; and sometimes from the absorption of putrescent matters lodged in the uterus and vagina after parturition.

It would appear, also, from this inquiry, that the miasms of typhus, erysipelas, and puerperal fever are severally capable of producing any one, or all, of these diseases; and that they may attach themselves to the persons and clothing of mid-wives and physicians, and thus be transported from these sources, to the chambers of lying-in women. The more ordinary form of disease, induced by the febrile effluvia in question, is typhus and its modification, typhoid fevers; while puerperal fever, and hospital erysipelas, are but varieties of that disease, taking their forms from the peculiar predisposing conditions of system.

The following facts are important,

1. Let the physician take care.
2. When it breaks out in a hospital, thorough resort to disinfecting agents and ventilation, and dispersion of patients is necessary.

PROF. CLARK said:—I am not so well prepared this evening to speak upon this question as I hoped to have been. I have not had the time to study my own papers; the subject has occupied my thoughts for twenty years, and commands my earnest attention at this moment, for since the last meeting of the Academy, the disease has appeared at the Bellevue Hospital; two patients have already died of it, and seven are now under treatment. I name this incidentally, as I may allude to it again in speaking of the treatment.

With reference to the points that have been made thus far in the discussion, I have little to say; I am obliged to confer with Drs. Francis and Smith, in regard to the communicability of puerperal fever, whether by miasmatic infection, or by contagion, is a matter of far less importance than the fact that it can be conveyed by the physician. The mode of the conveyance has excited a great deal of speculation; but the poison has never been isolated. It is not known whether it is im-

bibed by the cuticle; or, as Tyler Smith has said, is breathed into the lungs, and through them, entering the blood, and thence coming forth as a halitus; or, whether it is carried in the clothes or hair.

2. As to its connection with typhus. At the present time, we have puerperal fever at Bellevue; but there is not a single case of typhus fever in the whole house; either in the male or female division. There has been no case on the female side for two months, and none on the male side for one month; and in the whole house, there have been only five or six marked cases during the whole of the last six months.

The epidemic, of which Dr. Vaché has given an account, in 1840, perhaps the most severe that has ever visited the Institution, was not preceded, attended, or soon followed by any marked increase of typhus or typhoid fever. The same may be said of the puerperal fever in 1851 and 1852. On the other hand, the severe typhus epidemic of 1846-7-8, came and went without any unusual occurrence of puerperal fever.

Dr. Reese, will, I have no doubt, bear testimony to the latter statement. It would seem then, that at Bellevue there are no fixed relations between these diseases.

I am aware that puerperal women have been placed in beds near those who have had typhus fever, and have died of puerperal fever; but unless these cases are adduced in sufficient numbers to balance the cases on the other side, they may be but coincidences.

No relation has been established between the typhus and puerperal fevers, as far as the City Inspector's reports are concerned. We have these reports from the year 1804; but from the year 1804 to 1829 or 1830, the number of deaths from these affections was annually too small to be of much value. It is impossible, without access to the City Inspector's office, to make an exact comparison from these reports; as all the persons dying from puerperal fever, "childbed," "convulsions," and from "abortion," are all classed under one head. But as those from convulsions and abortion bear pretty nearly a fixed relation to the population, we may assume that the fever causes the principal changes in the number from year to year.

The following figures will show the number of deaths from puerperal diseases, and from typhus and typhoid fevers, from 1830 to 1853:—

In	1830,	we had	59	puerperal,	and	53	typhus deaths.
"	1831,	"	36	"	"	54	"
"	1832,	"	60	"	"	84	"
"	1833,	"	39	"	"	62	"
"	1834,	"	61	"	"	106	"
"	1835,	"	61	"	"	47	"
"	1836,	"	76	"	"	117	"
"	1837,	"	64	"	"	338	"
"	1838,	"	40	"	"	104	"
"	1839,	"	29	"	"	97	"
"	1840,	"	66	"	"	144	"

And so on, till we come to the year 1847, which must be regarded as the *test* year.

In 1847,	we had	94	puerperal,	and 1396	typhus deaths.
" 1848,	"	147	"	948	"
" 1849,	"	138	"	602	"
" 1850,	"	152	"	472	"
" 1851,	"	166	"	1104	"
" 1852,	"	155	"	758	"
" 1853,	"	147	"	541	"

The numbers will sometimes be found to increase together; but the proportions in which they increase and diminish, show very few analogies between the two diseases.

PROF. CLARK here drew a contrast between the symptoms, duration, and lesions of the two affections, showing the wide differences which exist between them.

The relation of puerperal fever to erysipelas, at Bellevue, has long been remarked. My impression is that there *is a relation* between the two; this is the prevailing opinion there. A few days ago, when the puerperal fever broke out there, it was ascertained that erysipelas was prevailing to some extent in the surgical wards.

In looking over the City Inspector's report of deaths for fifty years, it is found that from 1804 to 1830 the ratio of mortality from these diseases is very variable; the numbers are, however, too small during this period to be of much value, but for the last twenty years, when the number from each is considerably increased, it will be remarked that they show a decided tendency to increase together, and to diminish together, the ratio of mortality varying but little.

Hospital Gangrene differs from erysipelas probably more in its appearance and its results than in its nature. It is, perhaps, erysipelas intensified, and somewhat modified in the tendency to spread over the body. But as the two occur under the same circumstances, and as they certainly have close alliances, what has been already said of one can hardly fail to be true of the other.

Pathology.—I am compelled to withhold my assent to the doctrine that this is a *fever*, and a fever only, under any circumstances. I have not yet seen a single puerperal woman die of an acute febrile disease of short duration, such as is usually called puerperal fever, in whom there could not be found, on post-mortem examination, some lesion of an *inflammatory* character. Dr. Gooch has expressed the opinion that this *fever* may occur *without lesions*. He says: "The experience of the last few years has taught us about peritoneal fevers (he prefers to call them peritoneal rather than puerperal) that they occur in their most malignant form and leave few or no vestiges in the peritoneum after death." Dr. Simpson has expressed the opinion that the disease occurs occasionally without lesions. "Occasionally," he says, "though very rarely, no inflammatory lesion whatever can be found in bodies of patients who have died of puerperal fever. Dr. Locock has observed several cases of this kind, and in the practice of the late Dr. Beilby I saw one very marked and rapidly fatal case of puerperal fever in which my colleague Prof. Bennett was unable to detect anywhere in the abdomen or uterus, its appendages or vessels, any trace

of inflammatory action or effusion." Tyler Smith regards it as, in some cases, an *inflammation*, and in others a fever. I would say that puerperal fever has *four principal* lesions, and many of a secondary character.

1. Inflammation of the peritoneum.
2. Inflammation of veins of the body of the uterus.
3. Inflammation of lymphatics of uterus, veins not involved.
4. Inflammation of inner surface of the uterus or endo-metritis.

I believe in every case where a full examination is made—I think in every case—one of these lesions will be found. In all cases where I have had an opportunity of examining, one has been found.

The first variety is the most common. It is found in the different stages of congestion, effusion of lymph, or the effusion of pus. One or other of these conditions is found in the great majority of the cases which I have examined.

2. The number of cases in which *inflammation of the veins* exists is small. I have met with it in a few cases. Cruveilhier, in the Hospital Maternité, met with it in very few cases; seven or eight in two years and a half. I have here the report of two cases which illustrate this form of the disease. The general characters of this lesion will be better understood by the examination of these plates. (From Cruveilhier's *Pathological Anatomy*.)

3. *Inflammation of the Lymphatics*.—This is more common than inflammation of the veins. It is very often seen, to a limited extent, as here, in the broad ligament under the fallopian tubes. It is very often met with in this limited extent when the chief lesion is peritonitis. This fact was first pointed out to me by Dr. Markoe, of this city, some years ago. At that time, however, it was supposed that it was the veins of this part that were the seat of the inflammation, but, on careful examination, it appears to be in the *lymphatics*, and not in the veins.

If Cruveilhier can be trusted (and I have met with confirmations of his opinion), when pus is met with, and can be traced to the lymphatics, the pus does not enter the circulation so as to destroy life, the lymphatic glands seem to filter it out, and prevent its transmission into the circulating blood. At least, pus can be traced in these cases into the lymphatic glands, but if the gland itself is not disorganized by the purulent deposit in its structure, it can not often be found in the tubes going off from the glands.

4. The next form of disease is that which Gooch, Simpson, and Tyler Smith regard as independent of anatomical lesion. The view which I wish to present of that class of cases is that they are probably all, in reality, pyæmia, resulting from inflammation of the inner surface of the uterus. In order that what I have to say on this point may be better understood, we will consider one or two points in the anatomy of the uterus after parturition. I have here the uterus of a woman who died of pleurisy, ten days after delivery, in the practice of Dr. Griseom. I have not thought proper to bring into this room, where there are so many practicing accoucheurs, a fresh specimen of the disease in question, though I could have done so. In 1840, it

seemed to me I could demonstrate that there was no lining membrane to the uterus, but that the uterine sinuses opened on the free surface of the uterus. These open mouths can be seen in a good light in this specimen, entirely uncovered by any membrane. I can pass this instrument (a probe) into one of these open mouths, and out of the cut surface of the uterus, and if I was disposed to make a patient dissection, I could trace them into the veins going into the general circulation.

These sinuses remain open, or rather openable, for at least ten days. Why do they not bleed? I do not know as any one has made an exposition of it. If I see it correctly, these sinuses are guarded by a valvular opening like that of the ileo-cæcal valve. There are two folds, the longest is the innermost one; through this inner fold there is a muscular fibre well marked, and, also, a smaller muscular fibre running through the shorter lip; these muscular fibres are continuous with the muscular fibre of the body of the uterus; when the muscular fibre of the uterus is well contracted, the shorter lip is drawn down on the inner one so that no blood escapes. When the muscular tissue is relaxed, the mouths open in this way (illustrated by two pieces of paper, the one overlapping the other, like the two parts of the ileo-cæcal valve, and the ends approximated) thus it is that bleeding occurs when the uterus is relaxed, and hence the necessity of having the uterus contract to prevent hæmorrhage.

If the open body of one of these sinuses be lifted, a sort of sac will be found one-sixteenth of an inch or so in depth; and, looking toward the wall of the organ, another little mouth, sometimes two or more; whether that has a muscular fibre I am unable to say.

Now, sir, the point I make, is this:—Inflammation of the inner surface of the uterus is, also, inflammation of the valvular mouths of the uterine sinuses, since they are really a part of this inner surface; hence endo-metritis, as it seems to me well to denominate it, is of necessity a limited phlebitis, and inflammation of this inner surface of the uterus is of common occurrence, in one, or other of its forms. Cruveilhier has described it as attended by an exudation which is soft, vascular, and areolar, the meshes of which are filled with blood clots. I have seen the exact copy of what he represents in Plate VI, of Book 4; and can state that the singular appearances there illustrated are due to fibrin, pus, and blood; the first forming a velvety surface on the interior of the uterus which holds in its fibres the other two, and that there is no proper vascularity in this exudation; it is nothing more than one of the least frequent of the results of endo-metritis. The more common results of the inflammation, are exudations of a creamy consistency varying in color from a pale pink, through a brick-dust to a brownish red, or sanæous hue, with or without a firmer fibrinous layer, in contact with the uterine surface; in rare instances the color is the dark green, represented by Cruveilhier.

When this endo-metritis exists with the symptoms of puerperal fever, though peritonitis be absent, and though pus be not found in the lymphatics or veins of the uterus, yet we are not at liberty to infer that the disease is a fever and nothing else. Here is a source of

purulent contamination. That pus is not found in the veins is not proof that it does not exist in the circulation; formed within the mouths of these sinuses, it would be readily washed into the circulating blood and produce the symptoms of pyæmia. Indeed, the proof of such contamination I have seen in the deposit of pus within the tissue of the liver.

I do not mean to say these four lesions are independent of one another. I do not mean to say that where there is found lymph effused, where there is peritonitis, or where there is inflammation of the lymphatics, there is no endo-metritis; for this endo-metritis is found in almost all cases; it is very rare for endo-metritis to occur without other lesions; again, it is not common for the neck of the uterus to have the same change that is found in the body, for the neck will often be found healthy, while the body is changed; this shows that the neck is subsidiary, and does not perform the same functions as the body, or, at least, is of a different structure. I have here a summary of all the additional lesions I have noticed as far as I am able to judge.

1. In most cases the fallopian tubes are found more or less filled with pus. 2. It is very common for serous membranes to be involved; the pleura is rarely free from hyperæmia; the pericardium is often injected; the stomach is almost always thickened and softened if not of a red color; the intestines are more or less hyperæmic, and hence the diarrhoea, which is more common than in other forms of peritonitis; the spleen is not commonly changed, except where there is some complication; the kidneys are not involved in the diseased action, at least they do not give any evidence of being involved; the brain is almost always implicated, there being fluid in the cavities, and the vessels of the brain bleed freely when cut. My own researches do not enable me to demonstrate any very striking changes in the blood, it is coagulated in the heart and larger vessels.

The larger veins are often stained by the coloring matter of the blood, after death; in one case, the autopsy was made one hour and a half after death, in order to see whether this staining was before or after death, no stains were observed; where the autopsies have been made within six hours after death there have been no stains. We can not demonstrate those changes in the blood which nature exhibits. In this respect, pathology is far behind nature. The graaffian vesicles are often of a muddy color, as if stained with pus; the ovaries are frequently infiltrated with serum, sometimes with pus. The primary lesions are in the organs of generation; the secondary are in the blood, and are found, indeed, in almost every organ of the body.

DR. REESE remarked that a law should be enacted to prevent persons from attending on puerperal women, after attending cases of erysipelas, hospital gangrene, or autopsies. He had never seen a case which justified the view of this disease being contagious. He had not found local lesions sufficient to account for its fatal results; had twenty-nine cases in the month of March, while in charge of Bellevue; and, in the first five, puerperal fever came on in one to four hours after confinement. He gave the wards up to an assistant, who had five cases in two days and two nights; this satisfied Dr. Reese, that he had not

communicated the disease, and he again resumed the charge of the wards] he lost five out of twenty-nine cases. Phlebitis and toxemia occurred in two; he believes the disease to be epidemic. We have had illustrations here; when it prevailed along the east and west sides of the city, while in the northern part, it was scarcely heard of.

PROF. SMITH said he would like to make an inquiry of Prof. Clark, as he did not himself enter into the pathology of the question, except to say, that the disease is a fever, and not a phlegmasia, and that the lesions which are found, are but complications. Prof. Clark does not discriminate between typhus in males and typhus in females. If he had excluded the typhus in males, perhaps the results would have been more equal. This exclusion of the males would alter the result.

These statistics are liable to lead us astray, unless we exclude the circumstances that modify the disease. I did not attempt to identify the diseases, typhus, erysipelas, puerperal fever, etc. I put it in the form of a query, in attempting to explain why typhus occurred, and puerperal fever did not. The legitimate and ordinary form of fever is typhus; where there is nothing to produce a modification, typhus and typhoid are similar idiopathic fevers, connected as one and the same disease, but meteoration at certain seasons, especially affects female constitutions, and under this influence, another form of disease is produced.

Rokitansky regards typhus and puerperal fever, as incompatible. But there was one case in Paris, where the intestinal lesions were demonstrated in a case of puerperal fever.

I have adopted the view, that this is a fever, and the local lesions are but complications. According to Prof. Clark, however, there is no case in which some lesion does not occur. Professor Ossianer was the first to notice cases without lesion. Dr. Locock says, such cases are rare, yet they do occur. Dr. Bennett examined a case minutely, in which not the slightest lesion was found. Admitting endo-metritis to exist in all cases, it does not, to my mind, prove that this is not an idiopathic fever. Are the lesions sufficient to destroy life as rapidly as we see it? Some secret poison must be at work in the blood, poisoning the patient. When Dr. Reese related the case of Dr. Forrester attending his patients, I was struck with its analogy to the cases where several physicians attended a case of erysipelas, and afterwards attended puerperal women, who suffered from the disease.

PROF. CLARK.—I will cheerfully answer Prof. Smith's inquiries. As to typhus occurring with puerperal fever in females, I am not able to give any additional facts. We know that typhus fever takes its full proportion of females,* and in epidemics more females are lost, because females are more about the sick. I know of nothing in the history of New York which would take epidemics out of this rule. In the severe epidemic of 1847, the number of deaths among females fell somewhat short of that among males. I can, if necessary, obtain the statistics on this point, but I believe the facts will be found substantially as I state them. Am glad Prof. Smith has given me an opportunity to explain a

* See BARTLETT on *Fevers*, 4th Ed., pp. 126 and 253.

a little more fully the purport of some of my remarks. I suppose I was understood to say that endo-metritis has been observed by every one, though the name is, perhaps, here used for the first time. What I intended to say is this, that I have seen, I believe, the cases which Gooch, Simpson, and others describe as puerperal (or peritoneal) fever, without lesions, and have never failed to find the evidences of endo-metritis. I did not intend to express the idea that this limited amount of inflammatory action could of itself, by the force of its local irritation, produce this terrible fever, and destroy life so rapidly, but that this inflammation is a purulent contamination of the blood, in manner already explained, and that the patient dies, not of endo-metritis, but of pyæmia. I have here a case reported at great length, in which death occurred after six days of illness. There was no peritonitis, no inflammation of the lymphatics or veins in the substance of the uterus; but there was endo-metritis, attended by a gruel-like exudation, of brick-dust color, which contained pus, fibrin, and blood. The tissue of the uterus, to a very minute depth from within outward, was stained of a reddish brown color. But the most important fact was that the liver presented numerous yellowish points, which, on microscopic examination, were found to contain pus, and in the center of each one of these points was a capillary vessel; this was, in all probability, a secondary deposit, and the endo-metritis was the spark which kindled the fire. Thus I am led to suppose it must be in other cases, where this lesion has been overlooked. Not that there are secondary deposits in each case to testify to the violence of the disease—for these are rare—but that there is a true pyæmia. A case of otorrhœa, with infiltration of pus into the jugular vein, and death in five days, was adduced. Many of these cases are rapidly fatal, others are not. I do not wish to be understood as excluding from this disease a febrile element, for that it unquestionably has; but, so far as my observation goes, it is accompanied by, if not dependent upon, a local lesion. I saw the erysipelas that prevailed throughout the country ten years ago; it began with a febrile movement. The febrile movement was a part of the disease, and preceded it. There is one point that is worth alluding to, viz., the absorption of the decomposed element in the uterus; this may be so, but I suppose the great cause of death is pyæmia.

Dr. Cock inquired of Prof. Clark if his investigations had been carried any farther than the appearances after death. Has he made any investigations, in the ordinary discharges of the lochia, whether they do not contain pus? Ferguson, many years ago, called these secretions pus, and he believed the veins of the uterus were the sources of the poison. Puerperal fever manifests itself, also, in a minor manner in phlegmasia dolens. I saw, with one of my Bellevue friends, one of these cases; she was then unequivocally in puerperal fever from phlegmasia dolens; it was a few hours before death.

Prof. Clark replied that he had appreciated the importance of the fact referred to in Dr. Cock's first question—had used such opportunities as he had met with to ascertain whether pus is produced in the uterus in other fatal puerperal diseases. In three or four cases of

convulsions he had not found it. Second, the contamination from purulent inflammation of the veins is not a case of the class falling under puerperal fever; it is allied to phlebitis in other parts of the body. A married lady who, it was thought, was threatened with convulsions, was bled; red lines followed from the point of venesection; she coughed, and had bloody expectoration, and, if she had lived long enough, would have expectorated pus, from the formation of metastatic abscesses in the lungs. These cases are therefore excluded.

(To be continued.)

BELLEVUE HOSPITAL.

Cases of Abscess of the Liver. Reported by JNO. C. DRAPER, M.D., House Physician to Bellevue Hospital. Service of DR. ALONZO CLARK, by whom the morbid specimens were presented at a meeting of the Pathological Society.

Case 1.—Dysentery—Abscess of the Liver—Pulmonia—Death—Autopsy.—Philip Jochune; German; æt. 38 years; tailor by occupation; admitted February 30, 1857; of intemperate habits. When he came in, he complained of dysentery and pain in the right hypochondriac region; his chest was carefully examined, but did not yield anything satisfactory, except a peculiar squeaking systolic murmur, heard most plainly at the apex; percussion over the liver caused considerable pain.

He stated that he had been troubled with dysentery and vomiting for eight days, and that three days before admission, he had a chill which lasted some time, and was followed by some little cough, but no expectoration; about the same time, there began to be a slight yellowish discoloration of the skin and conjunctiva, and some pain in the right shoulder.

As nothing of any moment was discovered in the chest, the case was regarded as one of simple dysentery, with some congestion, and, perhaps, inflammation, of the liver. He was, therefore, ordered to take a dose of castor oil, and thirty minims of laudanum, to be followed by three-grain doses of ipecac every two hours; under this, he seemed to improve, and the next day the evacuations became less frequent and painful.

February 5.—Patient was not so well as on the previous day; pulse 84; respiration 20; no cough, expectoration, or dyspnoea; pain over the liver much less; the chest was again examined, when there was found to be a sub-crepitant rhonchus over the whole thorax, with dullness, bronchial respiration, and bronchophony over the middle portion of left lung; it was also thought that there were signs of pneumonia at the right base, but they were not at all satisfactory. In the afternoon, patient began to fail rapidly, and stimulants were freely given, but he continued to sink, and died the next morning at ten o'clock.

Autopsy, thirty-eight hours post mortem.—Rigor mortis well marked; body well developed and in good condition; no marks of ulceration or injury on any part of the body. Cranial cavity:—Not examined. Thoracic cavity:—There was a small spicula of calcareous deposit on

the posterior curtain of the mitral valve, which had given origin to the peculiar systolic sound noticed; with this exception, the heart was healthy. The lungs were bound down by old adhesions, and presented here and there cicatrices, marking the position of past tubercular trouble. On making a section through the right lung, there was found to be pneumonic consolidation of the lower lobe; and, scattered through the whole organ, there were about a dozen small masses of tubercular deposit, varying in size from that of a pea to a marble. In the right lung, there was at the point where the physical signs seemed to indicate pneumonia, a solid mass about the size of an orange, and spheroidal in shape. Dr. Clark thought that it probably was an apoplectic mass; but, under the microscope, it showed cells which resembled pus or pneumonic globules that had become shriveled up, and on the addition of acetic acid, the triple nuclei were well developed. Abdominal cavity:—The liver was twice its natural size, slightly congested, and the peritoneal covering of the right lobe was coated with recent exudation, in which minute arterial capillaries ramified; the substance of the organ was healthy, with the exception of numerous small abscesses, which were scattered here and there, but mainly in the left lobe; the largest of these abscesses was three quarters of an inch in diameter. About the caput coli there was some little arterial injection, which extended over a space of ten inches, while at the lower end of the intestinal tract, from the anus nearly up to the sigmoid flexure, the mucous membrane was intensely inflamed, and dotted here and there with minute spots of ulceration. The kidneys were very large and weighed together twenty-five ounces, one being twelve and the other thirteen ounces; they were somewhat congested, but there did not seem to be any other sign of disease; the spleen was, also, very large, being four times its natural size; the other organs were healthy.

Case 2.—Dysentery—Abscess of the Liver—Peritonitis—Death—Autopsy.—Patrick Hart; widower; æt. 40 years; born in Ireland; laborer; admitted January 29. When he came in, he stated that he had been suffering for some time from dysentery, but whether it came on with diarrhœa, or not, could not be ascertained, as he gave very contradictory accounts concerning himself. At the time of admittance, he was having about eight evacuations in the twenty-four hours. He was ordered to take a dose of castor oil and laudanum, to be followed in the morning by fifteen drops of laudanum, after each passage.

February 1.—Patient was having from four to five evacuations a day; he did not complain much, and was up and about the ward.

February 4.—Was not so bright; tongue coated; had had a very slight chill the night previous; pulse 80; respiration 21; countenance anxious; his chest was examined, but gave no evidence of disease; there was no jaundice or discoloration of the conjunctiva, or other symptoms indicating trouble about the liver.

February 6.—Patient to-day began to complain of tenderness and pain over the whole abdomen; there was, also, some tympanitis on percussion; tongue loaded with a heavy dark brown fur; evacuations, four in twenty-four hours; as peritonitis was suspected, he was put on

the opium treatment; the opium was continued, with care in its use, but the patient continued to sink, and died on the 8th. The urinary secretion was suppressed during the last fifty hours of his life, but the examination of a small quantity which was obtained did not yield any evidence of renal disease.

Autopsy, thirty-eight hours post mortem.—No rigor mortis; cadaver well developed; no emaciation; there were no ulcerations or other signs of injury on the body. Cranial cavity:—Not examined. Thoracic cavity:—Heart healthy; right lung was bound down throughout its whole extent by adhesions; no abscesses. Abdominal cavity:—Organs all glued together by recent exudation of lymph, with effusion into the peritoneal cavity of about thirty ounces of serum mixed with flocculi of lymph; there was considerable arterial congestion of the peritoneal coats of intestines, which were greatly distended with gas. On removing and washing the colon, its upper portion, for a distance of a foot from the caput coli, was thickly studded with ulcerations, varying in size from one-eighth to three-fourths of an inch in diameter, some of these ulcers extended quite through the mucus into the muscular coat, but at no point was there complete perforation of the gut; the stomach was considerably congested about its greater cul-de-sac; the liver was fatty and increased in size, weighing six pounds and a half; the left lobe being almost as large as the right; in the substance of the organ, there were three large abscesses, the largest of which was about three inches in diameter, in addition to these were numerous small ones; the kidneys weighed nearly seven ounces each, and under, the microscope, the convoluted tubes were found filled with epithelium, so as to be completely choked up; the spleen was a little more than twice its natural size, and very friable.

Report of the Practice of the Second Surgical Division of Bellevue Hospital for 1856. By DR. STEPHEN-SMITH, Attending Surgeon.

(Continued.)

FRACTURE OF THE CLAVICLE.

Summary—whole number eleven.

Case 1.—Transverse Fracture near the Junction of Outer and Middle Third—Fox's Apparatus—Firm Union on twenty-eighth day—Shortening an inch—Outer Fragment Over-riding Inner.—A.G.; æt. 38 years; native of Ireland; laborer; of moderately temperate habits; was admitted four days after the injury. The fracture was through the outer third of the clavicle, in a transverse direction to the bone, and resulting in considerable deformity. Fox's apparatus was immediately applied; it was retained uninterruptedly for twenty-eight days, when it was removed, and the union was found to be firm; there was deformity, consisting of the over-riding of the scapular fragment to the extent of an inch.

Case 2.—Oblique Fracture of Middle Third, External Part, from a Fall upon Shoulder—Fox's Apparatus—Union on sixteenth day, but not firm.—T. R.; æt. 25 years; laborer; temperate; of good constitution; was admitted four days after the injury. The fracture was oblique through the middle third, near its junction with the outer third; was

caused by a fall from a tree upon the shoulder; Fox's apparatus was applied; the fragments were not kept in very exact apposition, the inner being uppermost. The patient was discharged on the sixteenth day, with the dressings on; the union seemed quite firm, but no forcible attempts were made to test it; there was considerable deformity, the inner fragment projecting upwardly.

Case 3.—Simple Oblique Fracture through Middle Third, External Part, from a Fall upon the Shoulder—Fox's Apparatus—Firm Union with Deformity.—D. Mc'C.; æt. 25 years; laborer; of good constitution; was admitted soon after the receipt of injury. Fracture was through the middle third, near its junction with the outer third, and resulted from a fall upon the shoulder; Fox's apparatus was applied, and continued for a period not specified. Union was firm when the patient was discharged, with deformity, and about half an inch shortening.

Case 4.—Simple Oblique Fracture of Sternal Third of Clavicle from a Fall—Discharged on second day.—J. M.; æt. 43 years; carpenter; of good constitution; was admitted soon after being injured. The fracture was through the sternal third of the right clavicle, and was occasioned by a fall from the third story of a building; he was considerably injured otherwise. Emphysema existed about the neck of the injured side; right arm was bandaged across the chest; the patient left on the second day.

Case 5.—Simple Oblique Fracture of Middle Third, External Part, from a Fall—Fox's Apparatus—Union firm at end of seventy-six days, with slight Deformity.—T. D.; æt. 45 years; laborer; of good constitution; was admitted eight days after the receipt of the injury. The fracture was at the junction of the middle and outer third, and occurred from a fall into a cellar, about ten feet in depth, the blow being upon the shoulder. Fox's apparatus was employed; these dressings were removed at the end of seventy-six days, when union was found firm; but there was slight deformity, the sternal extremity projecting upward.

Case 6.—Simple Oblique Fracture about the Middle of Right Clavicle, from Direct Injury—Fox's Apparatus—Refused Treatment—No Union at end of fourteen days.—W. G.; æt. 41 years; laborer; intemperate; admitted soon after the injury. He was struck by a stone falling from a three-story building, upon the occiput and clavicle of the right side; the injury to the head consisted of a scalp wound, exposing the bone. The clavicle was fractured transversely about its center, with but little tendency to displacement; the patient was delirious when brought to the hospital, and continued more or less intractable, while under observation; Fox's apparatus was applied at the end of a week, but he would not retain it for any time; he left the hospital on the fourteenth day, union not having taken place.

Case 7.—Simple Oblique Fracture about the Middle of the Right Clavicle, from a Fall upon the Shoulder—Fox's Apparatus—Firm Union on the forty-seventh day.—J. B.; æt. 29 years; laborer; intemperate; was admitted on the day of the accident. The fracture was

through the middle of the right clavicle; and occurred from a fall upon the shoulder; Fox's apparatus was applied, and retained without interruption for forty-seven days; on removal, the union was found to be firm, but slight deformity existed; the sternal portion being elevated.

Case 8.—Simple Oblique Fracture through the Middle, from a Fall—Fox's Apparatus.—A. C.; æt. 32 years; domestic; of good constitution; was admitted on the day following the injury. The fracture occurred from a fall upon the pavement, and was through the middle of the clavicle; Fox's apparatus was applied, and retained thirty days, when union was found to have taken place. There was deformity, the inner fragment projecting, and about half an inch shortening; for two or three days she complained of pain from pressure of the axillary pad; and after the removal of the dressings, she was found to have partial paralysis of the arm; she gradually improved from this condition, and when she left, was quite recovered.

Case 9.—Simple Oblique Fracture through the Middle Third, External Part, from a Fall upon the Shoulder—Fox's Apparatus—Firm Union on thirty-fourth day.—T. M.; æt. 53 years; laborer; temperate; was admitted three days after the injury. The fracture was about the junction of the middle and outer third. It resulted from a fall upon the curb-stone, the violence being received upon the shoulder; Fox's apparatus was applied, and continued thirty-four days, when it was removed, and union was found to be perfect. The only deformity was a slight elevation of the inner fragment.

Case 10.—Simple Oblique Fracture through the External Part of the Middle Third.—J. D.; æt. 28 years; laborer; of good constitution; was admitted on the day of injury. The fracture was the result of a fall upon the shoulder, and occurred at the external portion of the middle third; Fox's apparatus was adjusted to the shoulder, and on removal, on the eighteenth day, union was found to have taken place. The inner fragment projected, and there was three-fourths of an inch shortening.

Case 11.—Fracture through External Third, one inch from Scapular Extremity.—C. A.; æt. 55 years; of robust habit; was admitted for an injury to the left shoulder, occasioned by a fall upon that part. On examination the integument bore evidences of violence, but no other injury was detected than fracture of the clavicle near its scapular extremity. The patient could not place her hand upon her head, apparently rather from the contusion than the existence of fracture in this portion of the clavicle. There was no tendency to displacement, and the patient was simply confined to the horizontal position.

REMARKS.—*Sex.*—In this collection of cases we have two occurring in the female, which fact shows simply the greater exposure of the male to injuries.

Age.—The patients were all adults; this is due to the fact that only adults are admitted to the hospital.

Cause.—The cause of fracture, in every instance but one, was indirect, the violence being received upon the shoulder.

TABLE OF ELEVEN CASES OF FRACTURE OF THE CLAVICLE.

NO. SEX. AGE.	CAUSE.	POINT OF FRAC.	DRESSINGS.	TREATED.	RESULT.
1. M. 38.	—	Middle third, ext. part...	Fox's apparatus.	28 d.	Union, one inch short; external frag. proj.
2. M. 25.	Fall on sh'ldr	Middle third, ext. part....	Do.	16 d.	Union, inner frag. projecting.
3. M. 35.	Do....	Do.....	Do.	—	Union, half-inch short.
4. M. 43.	Fall...	Sternal third.	—	2 d.	Unknown.
5. M. 45.	Fall on sh'ldr	Junc. of mid- dle and ext. third	Do.	76 d.	Union, short; in- ner frag. proj.
6. M. 41.	Direct blow	Middle	None.	14 d.	No union.
7. M. 29.	Fall on sh'ldr	Middle	Fox's apparatus.	47 d.	Union, short; in- ner frag. proj.
8. F. 24.	Fall...	Middle third, ext. part...	Do.	30 d.	Union, half-inch short; inner frag. proj.
9. M. 53.	Fall on sh'ldr	Do.....	Do.	34 d.	Union, inner frag. projecting.
10. F. 55.	Fall...	Do.....	Do.	18 d.	Union, inner frag. project.; $\frac{1}{4}$ -inch short.
11. F. 55.	Fall....	One inch from scap. ext...	None.	21 d.	Uncertain.

Point of Fracture.—In about two-thirds of the cases, the point of fracture was at or near the junction of the external and middle third, being generally near the external extremity of the middle third, or at the point where the acromial curvature begins. In all these cases, the violence was received upon the shoulder. In two instances, the fracture was near the middle of the bone; and in one, was the result of direct violence. In one, the fracture was through the sternal third, about an inch and a half from the articulation of the clavicle with the sternum; while in a second, it was about an inch from the scapular extremity.

The point at which fracture of the clavicle occurs, depends upon the nature of the injury. If the violence is received upon the shoulder, the fracture is liable to occur, according to these statistics, near the junction of the outer and middle third, or where the acromial curvature begins, in the proportion of seven to two at its middle. This proportion corresponds very nearly with the statistics of Prof. Hamilton, who, in his admirable series of reports upon *Deformities after Fractures*, gives the following result:—"Of forty-eight simple fractures of the clavicle recorded by me, forty have occurred through the middle third, and a great majority, about thirty-five, at the acromial end of this third."* It is the recorded opinion, however, of many authorities, that the clavicle is more often fractured in the middle. Fractures at this point would appear to be exceptional, and depending

**Trans. Am. Med. Assoc.*, vol. 8, p. 425.

rather upon direct violence. In one case, the fracture was near the sternum, and was caused by a fall from the third story of a building, among the beams; there was but slight displacement, and this was readily overcome; the result was unknown, as the patient left the hospital on the second day.

Dressing.—The form of dressing employed was in every instance that known as Fox's apparatus. This was selected because simple in its application, and quite as effectual as any other. It rarely becomes disarranged, seldom gives the patient any uneasiness, and retains the fragments in as complete apposition as any dressings for fractured clavicle in use.

Length of Time under Treatment.—The length of time required for the union of fractures of the clavicle, as in fractures of other bones, depends upon circumstances. In one case, union took place in sixteen days, while a second required seventy-six days. As a rule, fractures of the clavicle unite with great promptness, according to good authority, in from fifteen to twenty days. In several of these cases, union had taken place long before it was deemed advisable to remove the dressings. It was frequently noticed, that at the end of the third week all motion between the fragments had ceased; yet, when the dressings were removed, and the shoulder left unsupported at the elbow, deformity occurred at the seat of fracture to such an extent as to excite apprehension lest the recent callus should give way. The dressings were, therefore, continued until a more permanent union had taken place.

Results.—In three cases, the patients left the hospital before union had taken place, in all of which there was no reason to apprehend other than favorable results. In the remaining number, union became firm in due time, and the patients left the hospital with useful limbs. It must be remarked of the female patient, however, in whom a temporary paralysis of the arm occurred, that she was daily regaining its use after the removal of dressings, and when she left there was but slight impairment of its motions. The paralysis was undoubtedly due to the pressure of the axillary pad, of which she made complaint, and on account of which she frequently removed the dressing. In every case deformity existed to a greater or less extent; this consisted of shortening, and in the projection of the internal above the external fragment, in all but two cases; in one of these, the external fragment projected above the inner, and in the second, the fragments passed each other laterally.

FRACTURE OF SCAPULA.

Summary—whole number, three.

Case 1.—*Fracture of Acromion from a Fall Upon the Shoulder—Result unknown.*—J. M., æt. 43 years; laborer; of good constitution; was admitted immediately after the injury. The acromion process was found to have been fractured off by direct violence, received in a fall from the third story of a building. There was, also, a fracture of the clavicle; the treatment adopted was elevation of the elbow, and firm

bandaging of the arm flexed upon the chest. The patient left the hospital on the second day, leaving the results of treatment unknown.

Case 2.—Fracture of Acromion from Violence received upon its Inferior Surface—Death on the eleventh day.—N. K., æt. 35 years; laborer; of good constitution; was admitted several hours after the accident. The injuries were received from a powder blast, and were very extensive and severe; they proved fatal on the eleventh day. On examination a penetrating wound of the right shoulder was found to have involved a fracture of the acromion process. The fracture was upon the under surface, completely through the bone, but not involving the fibrous covering of the upper surface. The fractured extremity, adhering to this substance, could be turned upward, as on a hinge; when brought into its proper position there was no displacement.

Case 3.—Fracture of the Spine of the Scapula.—T. H., æt. 36 years; laborer; of good constitution; was admitted seventeen days after the receipt of injury. The violence was caused by the fall of the weight in a derrick, which grazed the shoulder; the process was perfectly movable on admission.

TABLE OF THREE CASES OF FRACTURE OF SCAPULA.

NO. SEX. AGE.	CAUSE.	POINT OF FRACTURE.	DRESSINGS.	TREATED.	RESULT.
1. M. 43.	Direct violence	An inch from extremity of acromion process..	Elevation of arm.	2 d.	Unknown.
2. M. 35.	Do.....	Do.	None.	11 d.	Death on 11th day.
3. M. 36.	Do.	Two inches from extremity	—	—	—

REMARKS.—Of the three cases of fracture of the scapula here recorded, all involved the spine with its process; this confirms the general opinion that the acromion process is particularly liable to be fractured, owing to its exposed position. The second case presents a novel feature in the manner in which the injury was received, being upon the under surface of the process; this fracture was not detected until after death, as the fibrous structures covering the upper surface of the process remaining uninjured, there was no displacement. In the third case the fracture was the result of direct violence from the fall of a heavy body which grazed the shoulder; the point of fracture was much farther back than in the other cases, involving the spine of the scapula; the results of the treatment in these cases could not be obtained.

FRACTURE OF OS BRACHII.

Summary—whole number, ten.

Case 1.—Simple Transverse Fracture just above the Condyles—Paste-board Splint—Non-Union.—M. C., æt. 23 years; waiter temperate; having a syphilitic taint of system, was admitted on the seventh day after the accident. The injury occurred from falling down stairs, and consisted of a transverse fracture of the os brachii just above

the condyles; paste-board splints, carefully adapted to the posterior part of the limb in a flexed position, were applied on the tenth day. These dressings were retained three weeks, when they were removed, but no union had taken place. They were reapplied and retained for four weeks, but on their removal, it was found that no attempt at union between the fragments had been made. Patient left the hospital at the end of four months, with perfectly free motion at the point of fracture; about the lower fragment there appeared to be a large amount of ossific deposit; the health of the patient gradually deteriorated while he remained in the hospital.

Case 2.—Simple Fracture at Surgical Neck—Velpéau's Bandage—Result not noted.—H. D., æt. 50 years; intemperate; laborer; was admitted on second day after the accident. The injury was occasioned by a fall down stairs; there was perceptible displacement of the upper end of the lower fragment inward, and motion of the elbow with firm pressure gave distinct crepitus; the motions of the arm were limited, but the elbow could be applied to the side.

Case 3.—Simple Fracture through the Anatomical and Surgical Neck—Death.—N. K., æt. 35 years; laborer; of good constitution; was admitted soon after the accident. The fracture was the result of a penetrating wound of the shoulder, from a missile discharged from a blast. The patient died from other severe injuries, on the eleventh day. On examination, the os brachii was found fractured through its anatomical and surgical neck. The fracture commenced just below the tubercles, upon the internal aspect of the bone, and extended obliquely across to the opposite side, terminating by chipping off a portion of the articular surface.

Case 4.—Simple Fracture of Shaft—Result Uncertain.—E. W., æt. 20 years; seamstress; intemperate; was admitted one week after the accident. The injury was caused by a fall down stairs, and resulted in an oblique fracture through the shaft. The swelling having subsided, straight splints were applied, four in number, corresponding with the different aspects of the limb. They were retained in place until the fifteenth day, when the patient took her discharge. The results were unknown.

Case 5.—Simple Fracture through the Surgical Neck—Result not noted.—M. C., æt. 60 years; chamber-maid; was admitted on the second day after the accident. The fracture occurred from a fall down stairs. It was obliquely through the surgical neck, and attended with considerable shortening and deformity, the sharp extremity of the lower fragment being plainly felt in the axilla. Four straight splints were applied on the seventh day, with an axillary pad.

Case 6.—Simple Fracture of Surgical Neck—Result not noted.—E. B., æt. 54 years; laborer; of good constitution; was admitted twenty days after the accident. The injury was received from a fall upon the arm. The signs of fracture at the surgical neck of the humerus, were distinctly marked. The dressings consisted of Velpéau's bandage with an axillary pad.

Case 7.—Compound Fracture of Os Brachii—Simple Fracture of Both Bones of Fore-arm—Recovery.—D. G., æt. 12 years; was admitted soon after the accident. The injury was caused by the arm being caught in the wheel-band of machinery, and consisted of a simple fracture of both bones of the fore-arm, and compound fracture of the os brachii, near the middle of the shaft. The wound of the soft parts, was on the inner aspect. The fractures were dressed by the application of short splints to the fore-arm, and a long splint on the posterior surface of the arm; the wound being left uncovered so as to admit of examination, and the use of proper dressings. The splints were removed from the fore-arm in twenty-one days, when union was found to be firm. The external wound of the arm sloughed, and the patient sank very low. He, however, finally recovered, and left the hospital at the end of five months. There were still sinuses leading to the fracture, and some stiffness of the elbow joint.

Case 8.—Simple Fracture of the Inner Condyle of the Humerus.—E. H., æt. 27 years; laundress; was admitted on the day of injury. The accident occurred from a fall down stairs; the elbow receiving the violence. The inner condyle was fractured off, allowing partial luxation of the elbow. Pasteboard splints were applied on the twentieth day. The splints were adapted to the posterior and inner aspect of the limb, the fore-arm being flexed at right angles. These dressings were continued six weeks, when they were removed, and passive motion commenced. The patient was discharged at the end of two months, the motions of the joint being very much impaired.

Case 9.—Fracture Through the Surgical Neck—Perfect Union—No Deformity.—I. G., æt. 40 years; servant; intemperate; was admitted on the day following the accident. The injury was caused by a blow upon the shoulder with a club. The fracture was obliquely through the surgical neck of the os brachii. The limb was dressed with a pad in the axilla, and a splint extending from the acromion process to the external condyle, the arm being bound to the side, and supported in a sling.

NO. SEX. AGE.	CAUSE.	POINT OF FRAC.	DRESSINGS.	TREATED.	RESULT.
1. M. 28.	Fall ...	Junc. of shaft and condyles	Angular paste-board splints.	4 m.	Non-union.
2. M. 50.	Fall ...	Surg. neck...	—	—	Unknown.
3. M. 35.	Blast ..	Anat. and surg. neck.....	None.	—	Died.
4. F. 20.	Fall ...	Oblique of shaft.....	Four splints.	15 d.	Unknown.
5. M. 60.	Fall ...	Oblique of surg. neck..	Four splints.	—	Unknown.
6. M. 54.	Fall ...	Surg. neck ...	Velpeau's bandage.	—	Unknown.
7. M. 12.	Caught by wheel	Comp. of lower third	Posterior straight splint.	5 m.	Union; no deformity.
8. F. 27.	Fall ...	Inner condyle.	Angular paste-board splints.	42 d.	Union; no deformity.
9. M. 40.	Blow ..	Surg. neck ...	Four splints.	—	Union; no deformity.

REMARKS.—*Sex*.—In fractures of the os brachii, the proportion of females to males, has been two to seven.

Age.—All were adults but one, and four of the nine were forty years of age, or upward.

Cause.—In all cases the injury was direct, having generally been the result of a fall down stairs.

Point of Fracture.—In five of the nine cases, the fracture occurred near the upper extremity of the bone, or through the surgical neck. In one, the fracture extended to the head of the bone, producing an intra and extra-capsular fracture. The other forms of fracture present nothing of particular interest.

Dressings.—The dressings for fracture of the shaft, have usually consisted of four splints adapted to the limb, the external extending from the acromion to the lower border of the fore-arm, placed in a semi-flexed position. In fractures involving displacements at the elbow joint, angular pasteboard splints were used.

Results.—In four of the nine cases, the results of treatment were unrecorded; in three, the union was firm, without deformity; in one, the patient died; and in one, no union took place after four months, treatment. In the latter case the patient was suffering from constitutional syphilis; and general debility, to which causes the failure of treatment must be attributed. He was subsequently operated upon for ununited fracture, but without success.

PART SECOND.

CRITICAL ANALYSIS.

ART. VIII.—*Schilderung neuer Beckenformen und ihres Verhalten im Leben, der Praxis entnommen.* VON DR. HERMANN F. KILIAN, Professor der Geburtshülfe zu Bonn. Mannheim, 1854.

Description of some New Pelvic Formations, and their Influence During Life, taken from practice. By DR. HERMANN F. KILIAN, Professor of Obstetrics of the University of Bonn. Mannheim, 1854.

AMONG the different obstetrical works which have lately made their appearance in Germany, that of Dr. Kilian, on some new pelvic formations, deserves by far the greatest attention of the profession. It makes known a series of the most interesting and dangerous deformities of the female pelvis, which were entirely overlooked to the present time. The description of these deformities conveys a perfectly correct idea of the malformation, as we can testify, having had all the different specimens under our own observation. Moreover, this work confirms the reputation of its author, as one of the most distinguished obstetrical writers in Germany.

The book is divided into two sections:—

I.—*The Vertebral Sliding* (Spondilolisthesis.)*—The first discovery of a new unknown pelvic deformity was made by the author, in 1836, when on a visit to the Maternité, at Brussels. It came from a woman who died after a Cæsarean operation. All diameters of the basin were normal, but the antero-posterior of the entrance, which was very much shortened by the fact that the lumbar vertebrae had slipped forward, over the basis of the os sacrum. As this pelvis could not be obtained for closer examination, we were unable to give a more minute account of its peculiarities.

For the second communication of a similar pelvic deformity, we are obliged to Prof. F. A. Kiwisch, of Prague, in his treatise on midwifery. (Erlangen, 1851, § 99, p. 168–170.)

History of the Pelvis of Prague.—A primipara, æt. 24 years, entered the Lying-in Hospital on the 6th of June, 1849, with labor pains; she was a healthy, good-looking woman, with a regular stature; walking around in an erect position, only the left hip seemed to be a little higher than the right one. A very remarkable lordosis was discovered in the lumbar region, while a trifling kyphosis existed in the pectoral part of the spine. By digital examination, the pelvic cavity was found spacious; the head of the foetus very high above the en-

* Derived from *σπόνδυλος*, vertebra; and *δλίσθησις*, the act of sliding, slipping.

trance of the pelvis; the conjugate axis was very much enlarged by a large tumor protruding into the cavity, which was recognized to be the promontory of the sacrum. The external application of Baudelocque's *compas d'épaisseur*, showed a conjugate diameter of three inches and a half. But for obtaining a more accurate knowledge of the pelvic capacity, the entire hand was introduced into the vagina, and thus it was ascertained that the antero-posterior diameter of the entrance could not be more than two and one-tenth inches. Under these circumstances, and as the child was alive, the Cæsarean section was performed. The repeated hæmorrhages after the operation were so violent, that the woman died six hours after.

Description of the Pelvis.—The form, size, and weight of the pelvis were not different from other healthy specimens. But the os sacrum was very much curved; the os coccygis was turned forward in a most remarkable way; the pelvis had a very small degree of inclination; the flare of the hipbone are flat; and the acetabula turned unusually forward.

This state of things was found in all the other pelves of this kind, owing to the influence of an altered pressure of the vertebral column, the lumbar part of which was removed from its natural position. It will be sufficient to give a more minute description of the shape and diameters of the entrance, as the other divisions of the pelvis remain unchanged. The lateral diameter measured four and one-tenth inches; the diagonal (Deventer's) diameters, four and two-third inches; the basis of the os sacrum was three and one-tenth inches, or four inches broad. A vertical cut with a saw through this bone shows that it has been formerly in a softened condition, the consequence of which is seen in the foramina sacralia anteriora, which are smaller, flattened, and seem to have approached one another. The fifth lumbar vertebra has slipped down from the great articular surface of the os sacrum in such a direction, that the inferior surface of its body is situated upon the anterior surface of the first vertebra sacralis, so much so, that the latter one, which is about fourteen lines high, is perfectly covered from this lumbar vertebra to the extent of ten lines. The generally large inter-articular cartilage between the os sacrum and the fifth lumbar vertebra has nearly vanished; the articular surface of the first vertebra sacralis, which is usually straight and horizontal, has been made round and convex. The anterior surface of the displaced vertebra, is so much turned downward, that it forms almost a right angle with the first vertebra sacralis. Moreover, it is obvious that the last vertebra lumbalis has been compressed in its altitude, so that it is shorter than it ought to be. This vertebral sliding has caused a dilatation of eight lines in the lower part of the spinal canal, while the upper portion of the sacral canal is diminished in size, almost to one line. In consequence of this vertebral dislocation, the entire spinal column has been moved downward, so that the upper part of the fourth lumbar vertebra takes the place of the promontorium. The space between the latter and the symphysis pubis—the conjugate—is only two inches and eight lines.

The third pelvis presenting this deformity, has been discovered in Paderbon, Westphalia, Prussia; and is described for the first time by Prof. Kilian. The history of this case is very interesting, and at once throws light upon the origin of these deformities.

History of Case.—Catharina Lommius, born in 1810, was pregnant for the last time, in 1850; reared under the most distressing circumstances, she continued to live so unto her death; her parents as well as two of her sisters died so early, that the patient could not give any exact account of their former state of health; at ten years of age, she had a severe attack of typhus fever, the consequence of which was, as she expresses it herself—a stiffness of her entire system, depriving her of the free use of her limbs; but as she was obliged to do hard out-door work, and to stand for a long time in a bent position of her body, it happened that to the stiffness was added a distressing pain in her back; these pains in course of time increased so much that the patient was perfectly unable to walk in an upright position; her menses appeared for the first time, not before she had reached her twenty-second year, and were always scarce and irregular, but neither this incident, nor change of weather, had any influence upon these real ominous backaches, which never left her for any considerable length of time; though she was very much disfigured, she had an offer of matrimony in her thirty-fourth year, which she readily accepted. This was in the year of 1844; one year later she had an abortion, and it was a full year before she again became pregnant. This time (1845) she went the full term; but the attendant physician could not deliver her otherwise than by performing the Cæsarean operation, by which, both mother and child were saved. In the middle of the year 1850, patient had another miscarriage, from which she recovered; soon after the signs of another pregnancy became evident; the patient, who at this time came under continual medical attendance, proved to be of a very weak constitution; her stature was remarkable, for, when she walked round, she was so much bent forward that her motions resembled exactly those of a quadruped.

The external examination of the pelvic region disclosed an uncommonly deep sinking of the lower lumbar vertebræ, while the os sacrum, unusually curved, protruded far backward; by an internal examination no remarkable difference from the normal state was at first discovered. while the lower part of the pelvic cavity was of a very satisfactory size; the entrance of the basin was obstructed by a portion of the vertebral column, which lay over it like a roof, so much so, that the conjugate axis was concluded to be no more than two inches wide.

On December 25, 1850, labor pain set in, and when they had become very strong, Dr. Everken, of Paderborn, assisted by Drs. Gerlock and Wewer, performed the Cæsarean operation and extracted a living child; on the evening of 27th inst., the woman died from a violent peritonitis.

The pelvis taken from her was so much like the one above described, that it would be unnecessary and surpassing the proposed limits of this article, should we enter into a minute description of it. In both we find just the same anomalous formation in such a degree that the space

of the pelvic entrance is almost entirely occupied by the vertebral arch.

Professor Kilian is of opinion that this deformity is not to be attributed to a congenital defect, but that it took its origin during life-time, in consequence of disease. At any rate, in the case of Catharina Lommius, the malformation seems to have risen from continually hard out-door working, in a stooping position, joined to the influence of a very poor and improper nourishment. It seems that the development of the disease originated from a tubercular or scrofulous dyscrasia, which resulted in a merely local softening of both the inter-articular cartilage between the last lumbar vertebra and os sacrum, and the surrounding ligament and bones; in either pelvis a mollification of this kind seems to have existed, in consequence of which, during an injurious position of the trunk, the fifth vertebra lumbalis was brought a little out of its natural line, which dislocation, when once induced, increased slowly for years, till it came to such an extent as we find it in our specimen. A fourth spondylolisthetic pelvis was described by Professor Rokitansky, in the *Austrian Annals* (*Österreichische Jahrbücher*) several years ago, and afterward by Dr. Spaeth, in the *Journal of the Society of Physicians in Vienna* (*Zeitschrift der K. K. Gesellschaft der Aerzte zu Wien*, 10 Jahr., 1854.) This case was observed in the Vienna Lying-in Hospital February 22, 1856. It was found that when Clara T., at the beginning of her labor, was examined, the os uteri was scarcely to be got at with the index, from its being placed unusually high above the brim of the pelvis; at once it was ascertained that the last lumbar vertebra protruded considerably forward, so that it was impossible for the woman to be confined in the natural way. Therefore, the craniotomy forceps was applied, and the mother died some days afterward, in consequence of a metro-phlebitis. The pelvis thus obtained was sent to Prof. Kilian, by Prof. Rokitansky; it shows the same peculiarities as the other basins of this kind, and the anterior surface of the first sacral vertebra is covered by the inferior articular surface of the last lumbar vertebra; the os coccygis protrudes considerably into the outlet of the pelvis; the anterior wall of the pelvis is protruding in front; the articular surface of the basis of the os sacrum is not covered by the last lumbar vertebra, which is moved considerably forward; the sacral portion of the vertebral canal is very much straightened, but the pelvis is regularly formed in every other respect. Still, in one point, this specimen differs from the rest, viz.:—on the interior portion of the body of the last vertebra, two additional short articular processes are held on both sides, which are fastened by a thin cartilaginous plate in a corresponding articular cavity, situated a little above the first pair of foramina sacralia anteriora. By this newly held articular apparatus the sliding of the last vertebra is limited to a certain extent, and, in this case, we can not doubt that it is a congenital deformity.

Since the publication of Prof. Kilian's work, another similar pelvis has been discovered in the Anatomical Museum of Munich, and described by Dr. Breslau in the *Obstetrical Journal of Prof. Scanzoni*. (*Beiträge zur Geburts-Kunde v. Scanzoni, Würzburg, 1855, Bk. II.*

p. 7.) This pelvis resembles the other ones perfectly in its general outlines; the conjugate diameter only three inches and seven lines broad; the inter-articular cartilage between the last lumbar vertebra and os sacrum has disappeared, and these bones are united, forming an anchylosis.

II.—*The Spine—Basin (pelvis spinosa)—Acanthopelys.*—Prof. Kilian brings before the public, in this part of his work, a new and very disastrous malformation of the pelvis. At least, he is the first author who has so distinctly pointed out and limited this part of pelvic dystocia. All the different writers up to the present time, who touched this subject, not only lacked sufficiently correct observations, but even speak of the whole affair in such a vague manner, that they seem to doubt the fact; or, at least, are unconscious of its importance and frequency. That it is a most disastrous occurrence, and not so very rarely met with, is proved by *five* fatally ending cases, four of which came under the author's own observation in the time from 1829 to 1853.

Acanthopelys is a term applied to those pelves in which are found large and sharp edges (cristæ), or distinct points (spinæ), in the region and the direction of the linea ileo-pectinea. These sharp edges are merely a hypertrophied state of the cristæ and pectines ossium-pubis, a condition more commonly met with in male than in female pelves. They sometimes extend in length to the middle of the superior margin of the acetabulum and upwards of three lines in height. The points (spinæ), which very much resemble thorns, and are found growing equally in the direction of the linea ileo-pectinea, are considered by the author to be recently formed; they seem to spring up always from one very distinct point of the linea innominata, viz., where the synostosis pubo-iliaca is situated; they are three or four lines high, as pointed as a pin, consisting of a very condensed ivory-like osseous texture.

1. *Observation.*—The woman to whom this pelvis belonged, was a rachitic primipara. The labor pains dilated the mouth of the uterus very rapidly, and grew even stronger after the membranes were ruptured. Still, they could not accomplish the delivery of the child, which had a vertex presentation. A physician (Coroner Velten, M.D., of Bonn, Prussia,) was called in and found the patient in great agony. He instantly recognized a rupture of the uterus, and the patient died before any operation could be attempted. The pelvis thus obtained is of rachitic deformity, though not very much contracted, but of a considerable weight. All protuberances, prominences, and points of the basin are very conspicuously developed, especially the tubercula pubis. From both the spinæ pubis, the crista pubis ascends gently; but, instead of disappearing in about the middle of the horizontal ramus, it increases in height, on both sides, so as to form a sharp crista, like the edge of a knife, on the right side, while on the left, just above the synostosis pubo-iliaca, it increases to a steep, sharp-pointed spine of three lines. On either side, this osteophytic edge is fourteen inches in length. Exactly corresponding with this thorn, the lacerations in the womb began near the posterior wall and extended almost to the fundus. At the post-mortem examination, when an attempt was made to take the child out of the cavity, the hand introduced into the uterus

was able to feel instantly this sharp-pointed deadly spine springing from the pelvic entrance, and at once the examiner was struck with the idea that this extraordinary neoplasma was the cause of the uterine rupture.

2. *Observation.*—Barbara S., æt. 24 years; of a healthy constitution; entered the Lying-in Hospital of Bonn, Prussia, on October 31, 1829, and felt the first labor-pains on the 1st November. At about eleven o'clock, P.M., a living child of 7 lbs. weight was born. The confinement was unusually painful; and, after the delivery, the system of the mother seemed very much shaken, so that she was restless, complaining of severe headache and trembling all over the body. She fainted away several times. The after-birth was adherent to the *right* side of the uterus by a very dense fibrous tissue. When it was artificially removed, a hæmorrhage of about twelve ounces of blood followed, which was of a *peculiar, bad odor*. About midnight, the patient was roused from a short sleep by violent inflammatory pains in the abdomen. An exudative metro-peritonitis set in, which resulted in the death of the victim on the 16th of November.

Thirty hours after death, the post-mortem examination was held. Besides the characteristics of a peritonitis, the *uterus* was found in a very extraordinary condition. On the right side of its lower segment, just opposite to the right margin of the pelvic entrance, was a place, the size of a *silver dollar*, which resembled very much *gangrenous ulceration*, which the inflammatory process extended in every direction, involving the whole organ in a most marked degree. In the middle of this sphacelous spot was a deep impression, terminating in an apparently punctured wound, which *communicated with the cavity of the uterus*.

The pelvis taken from the body, and well macerated, presented the following peculiarities:—Nearly in the middle of the *linea ileo-pectinea dextra*, just upon the *right* synostosis sacro-iliaca, and corresponding to the place where the said gangrenous portions of the uterus is situated, a *large spine* sprung out, terminating in a sharp point; its base was one inch broad, its height four lines, and its osseous texture is of a very dense structure. Just opposite the synostosis pubo-iliaca sinistra, are found two very small, rough, lamellated, osseous deposits.

3. *Observation.*—Sophia M., of Honnef, near Bonn; æt. 21 years; of a seemingly rhachitic stature, entered the Lying-in Hospital of Bonn on the 22nd of October, 1841. After an external and internal examination, the pelvis was found to be of a rhachitic deformity, the conjugata measuring scarcely three inches; therefore, craniotomy was performed, as the child was ascertained to have expired previously. After one of the most difficult and protracted operations, the woman was at length delivered, but died nine hours after the removal of the after-birth. The pelvis, carefully taken out, proved to be of a very remarkable rhachitic appearance, the conjugate being of two inches and nine lines. From the middle of the *right linea ileo-pectinea*, rises a *spine as sharp as a pin, looking like a large thorn, its point being towards the cavity of the pelvis*; its situation is just above the synostosis pubo-iliaca; its basis measures ten lines, its height almost four

lines. Right opposite to this place, the uterus was perforated by the spine, so that its point entered into the cavity of the womb. Around the edges of this hole, the tissue of the uterus showed the symptoms of a very violent inflammation, occupying the greatest portion of its lower segment.

4. *Observation.*—Elizabeth B., of Coblenz, Prussia; a primipara; entered the Lying-in Hospital of Bonn, on the 2nd March, 1850. Her first labor-pains began on the 17th March; up to that time, she continually complained of a *very distressing, painful sensation in the lower part of her abdomen*. The labor began towards night, and proceeded satisfactorily; and at about five o'clock A.M., of the following day, the head advanced almost to the outlet of the basin, but here it stood immovable. The pains were entirely exhausted, so that, at about seven o'clock A.M., a forceps operation was resorted to, after which the mother felt quite easy and well. But in the course of the day, she complained again of the above named pain in her abdomen, especially on the left side; her pulse became a little feverish, with exacerbations toward morning on the following day. This state of things remained without any alteration until the 22nd March, when the woman died suddenly. A post-mortem examination, at first, seemed to give no explanation of this unexpected event, till at length there was found between the lamina of the *ligamentum uteri latum* a copious coagulated extravasation of blood, and after dividing the ligament, a *rupture of the uterus, four inches long*, was disclosed, which entered into the cavity of the organ. Just opposite the place of this laceration, stood a *double-pointed prominence of considerable size*, in the entrance of the left side of the pelvic cavity; the pelvis was in every other respect a model of good formation. This double, sharp, osseous elevation is situated, as in the cases already related, just upon the synostosis pubo-iliaca. The whole length of this peeten is ten lines, the height of the anterior point is about five lines, the posterior about two lines.

5. *Observation.*—Mrs. S., of Bonn, was delivered in her previous five confinements by forceps; her pelvis appeared to be not large enough for the enormous size of her offspring. She entered her sixth labor on the 25th of April, 1853; the pains were very strong, and brought the head almost into sight, when the woman suddenly cried out: "Now the child must have turned itself round!" After uttering these words, the labor ceased, the signs of a uterine rupture appeared, and the woman died in a short time, before the child could be extracted; so it was removed by Cæsarean section, its entire body having nearly entered, through a lateral rupture of the womb, into the abdomen. The dilatation began on the *left* side of the lower uterine segment, very near the orifice, and extended upward nearly to the insertion of the left tube. The pelvis is a *very regular one*, with exception of the *left crista ossium pubis*, which is twelve lines long, one line and a half high, and *as sharp as a knife*. Just opposite to this cutting prominence, the lower corner of the uterine wound was situated.

In concluding, Professor Kilian calls the attention of the physicians to this dangerous pelvic deformity, and asks them to examine the

condition of the pelvis closer than they used to do it, whenever an opportunity is offered to make a post-mortem examination after a rupture of the uterus. The author believes these osseous excrescences to be *osteophytes*, originating in the course of life, partially by a physiological, partially by a pathological, process. Among the latter, he believes that arthritic attacks, coxalgies, deposits of pus near the basin, etc., are the principal causes of these productions. But before all, his opinion is that these neoplastic formations are to be placed among the "*puerperal osteophytes*" of Rokitansky, as he often found in recently confined women this same sort of osseous exudation in different regions of the pelvis. They are most commonly met with on the inner surface of the rami horizontales, ossium pubis, on the upper sacral vertebræ, or in several other places.*

E. NOEGGERATH, M.D.

BIBLIOGRAPHICAL NOTICES.

ART. IX.—*The Microscope: and its Revelations.* By WILLIAM B. CARPENTER, M.D., F.R.S., F.G.S. Examiner in Physiology, etc., etc. With an Appendix containing the applications of the Microscope to Clinical Medicine, etc. By FRANCIS GURNEY SMITH, M.D. Illustrated by four hundred and thirty-four engravings on wood. Philadelphia: Blanchard & Lea, 1856. pp. 724.

WE welcome any work which tends to facilitate the practical use of the microscope; for we regard this instrument as the most important means for the correct investigation of disease yet discovered. Within the short period of its employment in pathological researches, it has accomplished more in giving us positive knowledge of the laws of disease, than had the observations and speculations of previous centuries. Dr. Carpenter has long ranked as one of the most reliable authorities in matters pertaining to physiology, both human and comparative. His voluminous writings in this department attest his industry, and the rapid sale of his works proves their general excellence.

The present work, though designed as a manual for students engaged in the study of microscopy, embraces a large field of natural science. It not only instructs the student in the principles of the microscope and the manipulations of the instrument, and the preparation of objects, but leads him to the study and contemplation of the lowest forms of animal and vegetable life, and their relation to higher organizations. He thus lays insensibly, the correct foundation of a thorough knowledge of animal and vegetable physiology.

* How Dr. Husted (in his article "A case of uterine rupture, etc." in this Journal, of November last), to whom I gave the work of Prof. Killian for a perusal, came to the idea that the author considered *riding on horseback* to be the cause of this malformation, I am unable to conceive.

The editor has added to the American edition, an appendix containing the application of the microscope to clinical medicine, which greatly enhances its value.

This edition, thus enlarged, seems to us peculiarly adapted to the wants of the American student of microscopy, and to his attention we cordially recommend the volume.

ART. X.—*Lectures on the Principles and Methods of Medical Observation and Research, for the use of Advanced Students and Junior Practitioners.* By THOMAS LAYCOCK, M.D., F.R.S.E., F.R.C.P., Professor of Practice of Medicine, and of Clinical Medicine, in the University of Edinburgh, etc. Philadelphia: Blanchard and Lea, 1857. pp. 204, Duod.

DR. LAYCOCK has recently succeeded Dr. Alison, in the chair of Practice of Medicine in the University of Edinburgh, and is already favorably known as an author. His object in the present work, which is intended for advanced students and junior practitioners, is to meet the difficulties of medical observation and inquiry, which the medical man can alone appreciate, and to explain the nature of the mental processes by which professional skill and tact are acquired, and the mode of conducting them. Dr. Laycock discusses the nature and uses of theories and hypotheses, and gives illustrations of the fallacious use of the former, and shows that both theory and observation are necessary to the practitioner; theory, by pointing out what needs to be observed; observation, by correcting and enlarging them. He then passes in review the general method and objects of clinical study, and methods of clinical examination; and, under the head of *Clinical Observation of General or Constitutional Morbid States*, gives a sketch of the leading characteristics of the different diatheses and cachexes, and dwells particularly on the value of physiognomical diagnosis. One lecture is devoted to the subject of *Prognosis, and the Order of Succession of Morbid Phenomena*; another to the *Due Estimate of Treatment*, etc.; the *Numerical Method*, embracing its nature, special application, merits and demerits, illustrations of its uses, etc., occupies the sixth lecture; and the seventh and last explains and illustrates the *Analogical, Philosophical, or purely Inductive Method of Research*, and contains practical examples of the mode of conducting an analogical investigation, and of the application of the method of analogical research to anatomy, physiology, and histology. The book of Dr. L. is intended as a complement to the works on physical diagnosis, of which we have several very good ones; it opens new paths of thought and modes of investigation to the medical student, and may be consulted by him with advantage, in his preparation for the toils and struggles of professional life.

ART. XI.—*Medical Notes and Reflections.* By SIR HENRY HOLLAND, BART., M.D., F.R.S., etc., etc. Fellow of the Royal College of Physic; Physician in Ordinary to the Queen, etc. From the third London edition. Philadelphia: Blanchard and Lea, 1857. pp. 493, 8vo.

THIS work of Dr. Holland was first brought before the profession, in our country, by an edition published in Philadelphia, in 1839; republished from the first London edition, which appeared the same year. Additional interest has been given to it by the recent visits of the distinguished author among us, and we are now pleased to see an enlarged and improved edition of it from a third London edition, to which he has added a preface. The alterations in this edition embrace both the topics and the arrangement of them. The chapters on psychological subjects, which appeared in the two former editions, have been withdrawn from this, and published in a separate volume, under the title of *Chapters on Mental Physiology*, and their places supplied by other papers relating more directly to practical medicine. In this edition, also, the subjects are arranged more in the order of the relation they bear to each other, the first part of the volume being occupied with those on pathology; and the latter half, with those on the treatment of disease. Four new chapters are, also, added, viz.: *On Pain, as a Symptom of Disease*; *on Points where a patient may judge for himself*; *on Internal Hæmorrhages and Morbid Secretions, or, the Subjects of Medical Treatment*; and on *Hypochondriasis*; and many of the chapters have been enlarged and improved.

The work of Dr. Holland is too well known, and too highly appreciated by the profession, to need any recommendation by us. Embracing, as it does, the fruits of the study and observation of nearly forty years, of one so highly qualified, and so favorably situated, it can not be otherwise than valuable, as well as interesting. The difference in the typographical appearance of this reprint and that of 1839, speaks much in favor of the great change which has taken place in the getting up of medical books.

ART. XII.—*Hints on the Medical Examination of Recruits for the Army; and on the Discharge of Soldiers from the Service, on Surgeon's Certificate.* Adapted to the service of the United States. By THOMAS HENDERSON, M.D., Assistant Surgeon U. S. Army, etc., etc. A new edition, revised. By RICHARD H. COOLIDGE, M.D., Assistant Surgeon U. S. Army. Philadelphia: J. B. Lippincott & Co., 1856.

The first edition of this work was published in 1840, and met with great favor. A second, and enlarged edition was prepared by its author, who died before its issue. Its revision was undertaken by Dr. Coolidge, by whom its publication has been superintended. It is a manual of practical interest to the army surgeon.

PART THIRD.

MEDICAL RETROSPECT.

SURGERY.

A New Anæsthetic Agent.—DR. SNOW, of London, who has studied the effects of anæsthetic agents with great care, has recently introduced into practice a new agent of this class, called "amylene." Its composition is $C^{10}H^{10}$. It is a very light and volatile liquid, being only two-thirds as heavy as water, and boiling at 102° Fahr. The vapor is less pungent than that of chloroform, although the patient breathes it in much larger quantities. It was first discovered by Calroues, a French chemist, about fifteen years since. Dr. Snow administered amylene, recently, to several patients in King's College Hospital, on whom operations were performed. The pain was entirely prevented, although the patients did not become completely stupefied.

Fracture of Clavicle United without Deformity, by Position.—A case of fracture of the clavicle is reported by Dr. EVE (Nashville *Jour. of Med. and Surg.*) in which the patient had, also, received a severe wound of the arm. For this, he was confined to his bed, on his back, nearly six weeks; at the end of which time, the clavicle was found to have united without deformity.

Reduction of old Dislocations—Of the Femur on the Dorsum Ilii sixty-four days after injury.—DR. CHOPPIN, of New Orleans, reports (N. O. *Med. News and Hosp. Gaz.*) a case of dislocation of the femur on the dorsum ili reduced sixty-four days after the accident. The patient was a stout, robust man, æt. 34 years, whose limb was dislocated, while kneeling, by a blow upon the sacrum. Efforts at reduction were made with pullies, but unsuccessfully. He entered the Charity Hospital, where reduction was effected by the pullies.

The following is the rule of practice laid down by Sir A. Cooper:—"reduction of a dislocated femur of eight weeks' existence should never be attempted." The case above cited, with the following, collected by Dr. Choppin, tend to invalidate this rule. Dupuytren reduced a luxation upward, on the dorsum, on the seventy-eighth day; McFarlane reduced a similar one on the sixty-fifth day; Guillaume, of Salicet, reports one reduced after one year's existence.

Of the Fore-arm Backward at the Elbow, between the seventh and eighth months after injury.—DR. BECK, of Indiana, reports (*West. Lancet.*) a case of backward dislocation of the fore-arm, at the elbow, in a lad, æt. 7 years, which he was able to reduce between the seventh and eighth months after the injury, under the following circumstances.—While playing, the patient fell upon the arm, flexing it strongly; this

accident broke up the old adhesions, and, on extending and flexing it, the reduction was easily effected.

Extirpation of the Parotid Gland, and Ligature of the Common Carotid Artery.—DR. D. W. BLISS relates (*Medical Independent*) a case of malignant disease of the parotid gland, for which extirpation was successfully practiced. The patient was a female, æt. 41 years; the tumor was of three years' growth; of the size of half a goose egg; immovable, dense, nodulated; having a broad base, and situated in front of the left ear, being attached to the ramus of the lower jaw. In the progress of the dissection, it was found necessary to ligate the common carotid. The tumor extended very deeply, and gave rise to severe hæmorrhage. The operation was accomplished without great difficulty, and the recovery was attended with no bad symptoms. She died at the end of sixteen months, from a return of the disease.

Removal of the entire Ulna.—MR. G. M. JONES, of the Jersey Hospital, reports (*Medical Times and Gazette*, December 27,) a case of successful removal of the entire ulna for necrosis. The patient was a female, æt. 25 years, of slight and delicate appearance. The disease was excited by a fall upon the right fore-arm, which was followed by pain, and the formation of an abscess near the elbow; other abscesses formed over the middle part of the ulna, and the entire bone finally became implicated. At the time of her admission to the hospital, "there existed an unhealthy ulcerated surface, about the size of a two shilling piece, immediately over the styloid process, some ten or twelve sinuses from this point to the upper third of the arm; considerable puffiness at the elbow, and boggy feeling at that part; much expansion in some places, depression in others; and a sloughing tendency throughout the soft textures in the vicinity of the different sinuses." An operation was determined upon, which resulted in the removal of the entire ulna, this bone having been found diseased throughout its whole extent. The wound suppurated freely, and, at the date of the record of the operation, had healed, and the patient walked with her arm unsupported. The condition of the arm at this time is thus described:—"the appearance of the arm is such, that no one would imagine the ulna is wanting, the head of the radius has so beautifully adapted itself to the parts, that even manipulation leads one almost to imagine the olecranon still exists; there is considerable movement of the wrist and elbow-joints, of the former particularly." Mr. Jones states that this is, according to good authority, the first recorded case of removal of the entire ulna in England.

Exsection of the Elbow Joint.—PROF. BLACKMAN has reported (*Western Lancet*) a successful operation of this kind. The patient was a female, æt. 24 years, in whom the elbow joint had been destroyed by suppuration. The wound healed very promptly, and six months after the operation, the patient had acquired considerable use of her arm, and it was confidently anticipated that she would finally have a very serviceable limb.

Removal of the entire Scapula.—MR. SYME removed, on the 1st of October (*London Lancet*), the entire scapula, with its processes and

glenoid cavity, at the Royal Infirmary of Edinburgh. The patient was an elderly female, and the disease was a cystic-sarcomatous tumor. At the date of the report, the patient was doing well, and there was grounds to believe that the arm would become quite useful, though deprived of the shoulder-blade.

MIDWIFERY.

Fatal Hæmorrhage into an old Ovarian Cyst.—By JOHN SODEN, Esq., F.R.C.S., etc.—Mr. S. was called at midnight to see a lady, æt. 48; healthful in appearance; large and well formed; who, after a long evening walk, had been seized with such severe pain in her left side, that she entered her house with difficulty. The patient was in bed, with anxious countenance; chilly; pulse small and feeble; intense suffering in left hypochondriac region, just over the large end of the stomach; acute sensibility to the touch radiated from this point, with diminishing severity over the abdomen; character of pain that of peritonitis, not hysteria; patient had vomited three times; ejected matters not kept for examination. On the following morning, patient somewhat composed by opium, but the persistent tenderness on pressure rendered minute examination impossible; abdomen more generally sensitive, and becoming tympanitic; no febrile reaction. Next day somewhat better, but on the following not so well; return of sickness, increased tympanitis and prostration; pain more felt around the lower part of the abdomen, but still most marked in its original site; support necessary. After this date, matter vomited contained blood. On the thirteenth day she died from exhaustion.

Post Mortem.—Abdomen greatly tympanitic; traces of peritonitis general, but best marked about region where most pain had been complained of; lining membrane of stomach somewhat congested, but not remarkably so; large cyst, the size of a child's head, a year old, filled with blood, found in "the right pelvic region;" blood dark and partially coagulated; uterus and remaining appendages and other viscera healthy.

When 18 years of age, this patient had been the subject of ovarian dropsy, which "relieved itself by bursting through the bladder."—*Association Med. Jour.*, (Dec. 6.)

Sugar in the Urine of Parturient Women, of Nurses, and a certain number of Pregnant Women.—M. Blot has recently presented to the French Academy of Sciences a communication, from which it appears that sugar exists, nominally, in the urine of all parturient women, and in that of all who are nursing, and in that of a certain proportion of pregnant women; that the urine, in all these cases, exhibits, by different tests, properties which belong only to sugar.

In all parturient women, the sugar begins to show itself in the urine, in a sufficient quantity to be estimated at the time when the secretion of milk commences. In most cases, it appears only at this period; but in some instances it is found earlier, but usually in a very small quantity. In nursing women, the quantity of sugar is in proportion to the abundance of the secretion of milk. If this secretion is

diminished, or dried up from any cause, the sugar either diminishes, or disappears completely. Sugar continues to be found in the urine as long as the secretion of milk continues.

The quantity of sugar varies in different women, and at different periods of lactation. The quantity found by M. Blot has varied from fifteen and thirty grains to twelve drachms, to sixteen ounces of urine.

In pregnant women, sugar was found in about one-half of the cases observed; the author believes, without being able to say so positively, that this peculiarity more especially exists, when the sympathetic symptoms of pregnancy in the breasts are well developed.

M. Blot has already commenced some researches upon the females of different species of mammiferous animals, and in nine observations upon the cow, it has occurred in every case.—*Arch. Génér. de Med.* Nov., 1856.

CORRESPONDENCE.

ROME, February, 12, 1857.

MR. EDITOR.—First, among the many attractions to a medical man, traveling abroad, are the hospitals, and public institutions, appropriated to the sick. He can not enter a city of Europe without finding one or more of these institutions of public charity, many of them of immense size, and of such architectural beauty, as to be, in themselves, objects of interest. Many are endowed with princely liberality, and supplied with every convenience for promoting the comfort of its inmates. In visiting them, we can not but admire the respect and sympathy with which the sick are approached; and the care and devotedness with which they are “nursed and tended.” Whatever may be the faults of the French and Italians; however thoughtless and trifling, and apparently selfish the former, and indolent and indifferent the latter, their sympathies are easily excited in behalf of the sick and disabled.

Our stay in Paris was so short, that we had not the opportunity of making many visits to the hospitals; short as it was, however, we could not resist the desire to see, once more, the great men of that city. We found Velpeau, Nélaton, Jobert, Ricord, Chassaignac, Rayer, and Rousseau, still occupying their former positions; still lecturing to crowds of admiring students. Nélaton is now looked upon as the first surgeon of Paris. Although Malgaigne, Jobert, Velpeau, Robert, and, perhaps, Laugier, dispute the palm with him; their countrymen may not side with me, in the opinion I have expressed, but all foreigners look upon him as first authority; not only at the hospital, has he acquired this enviable notoriety, but in private practice. Strangers from all parts of the world, seek his advice, and he seldom fails to give satisfaction; he is very conservative, and his success remarkable, but like the rest of mankind, not infallible.

We visited the new hospital, over which M. Chassaignac presides; this is one of the handsomest institutions of the kind in Paris, and admirably constructed for air and ventilation. It is situated in the north-eastern part of the city, near the Northern Railway; it was commenced

by Louis Philippe, but having been endowed by Lariboisiere, a man of wealth, in Paris, was named after him; it is a two story building, inclosing a handsome oblong court, which is tastefully laid out in plots of green turf and flower-beds; an arched arcade, or piazza, passes round it on the inner side, upon which the windows of the wards open. The walls and ceilings are handsomely painted, and the floor highly polished; the beds are clean and tidy, and comparatively few in each ward, which are well supplied with baths, and water arrangements of every description. There is not, in Paris, a better arranged, or a more appropriate building for the purpose for which it is designed, than the Hospital Lariboisiere.

We had an opportunity of witnessing an operation by M. Chassaignac, with his favorite instrument; after a circuit of the wards, we went to the amphitheatre, and listened to a lecture on the uses and advantages of the seton in caries, not only of the spinal column, but in other bones; and, also, in chronic abscesses; when he exhibited to us, by way of illustration, several cases of caries of lower jaw, tarsus, meta-tarsus, carpus, meta-carpus, and, also, abscesses of different parts, and among them, abscesses of the female breast, with setons introduced. He finished his hour by operating on a man for fistula ano, with his much-talked of Ecraseur; the patient had been prepared by wearing for several days a seton of india-rubber. M. C. attached one end of his crushing-saw (if I may call it so) to the seton, and drew it through the fistulous tract, out through the anus, then attached to the handle, tightened it very gradually, and in about one minute, it tore its way out; not a drop of blood followed, and the patient being under the influence of chloroform, felt no pain. In remarking on this procedure, he said that two good results were to be derived from it; 1. There was no hæmorrhage; 2. The inflammation it produced promoted a rapid cure.

Through the kindness of a friend, we obtained the entrée to the great hospital at Florence; the visit, as in Paris, is made here, early in the day, when operations and clinical lectures take place. The Hospital St. Maria Nuova, formerly an old convent, is an immense building, containing beds for one thousand two hundred patients. The wards are very long, very lofty, and very cold; they cross each other at right angles, so that standing at the central point, where they intersect, you look down long radiating avenues of almost countless beds; the ceilings are arched, and the windows very near the top, and seem as if they were never meant to be opened; the floors are made of stone, rough and unpolished; the beds are small, with no curtains, and the whole presented a cheerless, uncomfortable, uninviting appearance. The atmosphere is close and disagreeable, as if not properly ventilated; yet, here is the field where many distinguished physicians labored, and where, at present, M. Rignoli, a man of learning and great reputation, holds his daily clinics. This gentleman is a graduate of the schools of Pisa and Paris, about 60 years of age, and whose intellectual countenance impresses you with his superiority. He arrived punctually, and having been presented to us, he disrobed himself, and put on an india-rubber over-coat, or palétot, (a very appropriate dress for a hospital surgeon,)

and commenced his visit, accompanied by about twenty students; his examination is after the manner of the best French teachers; questioning closely each patient, with regard to his troubles, and following with a lecture on the diagnosis and treatment. We had an opportunity of judging of his admirable manner, as a lecturer, in the case of a little boy, just brought in, who had some difficulty about the left hip joint; the history was very unsatisfactory, and furnished little, if any aid in arriving at a diagnosis. There were some few symptoms of luxation; after placing him in various positions, first reclining, then standing, and still unable to come to a definite conclusion, he gave a lecture on morbus coxarius, luxation, and abscess, one of which diseases, he felt sure it must be. We saw many interesting cases in his wards, such as strumous testes, artificial anus, which he proposed to operate upon after the Dupuytren method, in a few days; and finally, an operation on a femoral abscess, with a Guérin instrument, which removes the pus, and injects a solution of iodine, without removing it, or exposing the abscess to the air.

We noticed in this hospital, the ponderous dressing, and innumerable roller bandages, in the dressing of wounds, and so forth; but what surprised us, was, that all kinds of diseases were in the same wards; here were affections of the chest and fever, small-pox and dysentery, placed side by side. No classification existed, excepting the separation of surgical from medical diseases. With regard to anæsthetics, they are employed with the greatest caution, and chloroform never used, except in extreme cases. Professor Ranzi, another distinguished surgeon, who fills the chair of clinical surgery, and operative surgery, in the school of medicine, is also connected with this hospital, but we were disappointed in not seeing him; his wards were filled with interesting cases, and judging from the number of students awaiting him, his visits are highly appreciated.

Connected with this hospital is a physiological and pathological museum, and, considering the years it has been in existence, and the number of pupils educated here, it is remarkable that the preparations are not more extensive, particularly in the department of morbid anatomy. Some of the arterial preparations are beautifully made, but there is no variety. The great attraction here is the little table of SEGATO, who about one hundred years since discovered a method of petrifying human flesh, and offered it to the Government as a means of preserving or embalming bodies, but they not accepting it, he died suddenly without revealing his secret, and no one has been able since to divine the method or process. This little stand or table is made of wood, on the top of which is inserted pieces of intestine, lung, liver, and other viscera, like mosaic work, so well preserved that one can readily discern the kind of tissue in each space. There are in Florence two other hospitals, one for the insane, the other for foundlings.

Nothing in this city pleases us more than the wax preparations in the museum of natural history. These models represent every portion of the human body, with beautiful accuracy. There are, besides, models illustrating comparative anatomy and vegetable life, from the earliest germ to full maturity. The osseous, arterial, and nervous

systems are admirably displayed and the minute anatomy of the different organs are so faithful, that the masterly hand who prepared the dissections, must have possessed the most astonishing skill. So true to nature are they, that students meet here, at all times, to study, and, during the winter, daily lectures are given by the professors to their classes.

We devoted one morning of our sojourn in Naples to the hospital Santa Casa Degl. Incurabili, an unfortunate name for a general hospital. This is an immense building, of large revenues, where both sexes, all ages, and different ranks are admitted. The wards are lofty and spacious, as those of Florence, and built and arranged in the same manner, but the mouldy and dilapidated building itself, its general want of cleanliness and ventilation, its miserable beds and coverings were in striking contrast with the institution in Paris, first described. No particular classification exists here, except in cases of consumption, which is considered contagious, and a separate ward is appropriated to it. The surgical wards having the greatest attraction for us, we repaired thither, and were shown round by a gentleman, one of the attending surgeons, who happened to be making his morning visit. The wards contained many cases of fractures and other injuries, received from the explosion of a powder magazine, which occurred a day or two before our arrival, by which sixty or seventy persons were wounded, and several killed. Dr. Palasciano we found an intelligent and accomplished man, quite an enthusiast in his profession, and perfectly familiar with the reputation and writings of many of our medical men, and held us in great admiration. He showed us several cases of simple and compound fractures, which he was treating with the starch bandage, and he dwelt at considerable length on the importance of position in the management of these accidents. Patients were seen lying on their bellies, some on their sides, and some with their limbs extended, others flexed. Of the good effects of this plan of treatment we were not able to judge, as there were no patients convalescing. He claimed priority in breaking up ankylosed joints and dividing contracted tendons about them, a mode of practice which I thought belonged to Guérin. The museum of this hospital is unworthy such an institution.

There are seven other hospitals in this city, and among them two for the military, all inferior in magnitude and interest. I must not forget to mention while visiting the Museo Borbonico, where are displayed the various and innumerable objects of interest recovered from Herculaneum and Pompeii: we saw the instruments found in the house of a *medical gentleman*, and which proved that the surgeons of those days were skilled in operations, and practiced with weapons not unlike those employed at present. Here were seen probes, directors, scalpels, and bistouries, sharp-pointed and blunt; forceps for extracting teeth, and other purposes; trocars for the operation of paracentesis; lancets for bleeding, and among them a veterinary's phlegm. There were, also, irons for actual cautery, *tri-valved* and *bi-valved specula* like those now in use, and a male catheter shaped like the old style letter S. Among them, also, were to be seen slabs for making pills, and a

box divided into compartments, containing ointment and different medicines, and some pills of *heroic size*.

In no city in Italy are the hospitals richer or more liberally endowed than in Rome; deriving their incomes from property bequeathed, the papal treasury, and from large tracts of land which have been in their possession for years. There are six in this city, including one for the insane, and can furnish accommodation for between four and five thousand patients; St. Spirito is the largest, covering a large area of ground, and consisting of several buildings, among them one for foundlings; a considerable number of medical officers are connected with it as resident and attending physicians. Through the politeness of Dr. Valery, Professor of Pathological Anatomy, we were taken around the different wards, presenting very much the same appearance as those of Florence and Naples, except they were larger and higher, and having four rows of beds instead of two. Our professional brother, feeling a laudable pride in the institution, took us into almost every room, even to the kitchen and provision department, pointed out the excellent arrangements for the comforts of the sick, which surpassed those of any other establishment we had visited.

M. Lancisi, who, many years ago, was attached to this hospital, in both senses of the word, in heart and profession, left it a large sum of money, provided the directors would supply it with pure water. Accordingly, that important element is brought thirty-five miles expressly for its use, and it is the clearest and purest water I ever tasted. In a cabinet belonging to the museum, we noticed a great variety of calculi, some of very large size; upon inquiry, we learned that there are many patients operated on in Rome, for stone, most of whom are non-residents. The water of Rome is so pure and healthy, at the present day, that very little of that disease is met with in the city.

The museum is not large, but very choice; besides many wax models, there are to be seen the most perfect dissections of the arterial and nervous system, and great variety of unique morbid specimens. The dissecting rooms are very convenient, and in them we found students pouring over pathological material and engaged in other investigations. There is an arrangement in the dead-house here, which I believe is unusual. The bodies are placed upon tables near the wall, upon the wrist of each there is an iron band, to which is attached a cord connecting with a bell in an adjoining room, so that if any, supposed to be dead, should revive, they may give indication immediately of the mistake. This contingency has never occurred. Tied, also, to this band is a placard, upon which the day and hour of death is written, and twenty-four hours must elapse before an autopsy can be made. We found that no classification was adopted in this hospital, like the others; all diseases are together in the same ward. When small pox prevails alarmingly, the cases were isolated. At the time of our visit, measles was prevailing, yet, they were among the other cases of disease. This struck us as being very singular, that, in so large a hospital, different apartments could not be used for these cases; but notwithstanding this, the mortality is only ten per cent.

The surgical hospital proper is situated in another part of the city,

and is conducted in the same manner. It is much smaller, and receives only surgical cases. M. Constantini is the visiting surgeon, and enjoys a high reputation as an operator. We were unfortunate in not witnessing any operations at this establishment.

With regard to medical education in Italy, the advantages are very great, not only in clinical instruction, but at the different universities where medical lectures on every subject are given by distinguished professors. If the advantages are great the requisition on the part of the students are proportionably so; no student can commence the study of medicine, without a proper preliminary education. He is obliged to attend four years' instruction at the medical school, and submit to an examination at the end of each year; and before graduation as an M. D., he must enter a hospital as a clinical student, and remain there two years more, making, in all, six years of study.

The universities of Pavia, Padua, and Pisa *now* stand the highest. There are, also, good medical schools in Bologna, Rome, and Naples, but not of such reputation as those above named. The schools of Pisa and Florence are somewhat connected. The first years of education are derived from the university of the former place; the clinical instruction from the latter. But Pavia, Padua, and Pisa, "stand not where once they did;" instead of three hundred students—as at present—thousands crowded there, attracted by the reputation of a Scarpa, or a Morgagni, to say nothing of those learned female professors, "whose beauty was so striking, that a curtain was drawn between them and their audience,"

"Lest if these charms were seen, the students
Should let their young eyes wander o'er them,
And quite forget their jurisprudence."

Notwithstanding the number of medical men in the city of Rome, and great number of rare and interesting cases in the different hospitals, there is no medical society or periodical.

Much has been said and written on the climate of Italy; during our sojourn here, we have made many inquiries on this head, and, derived from this and our own personal experience, we come to the conclusion that Florence, in the winter, is not a residence for invalids, especially those laboring under pulmonary complaints. The temperature varies, and there is an element of dampness and chilliness in the air very penetrating. It rains frequently, and often snows, and I have heard invalids complain of the effect of these changes upon them; many are obliged to leave, and seek a more genial atmosphere.

Naples, although at certain seasons of the year perfectly charming, has not been recommended to pulmonary patients. There is a dryness in the atmosphere, and at times cold winds prevail, which is very unpleasant. Sir James Clark says:—"The autumn and winter are generally mild, and the spring is subject to cold, sharp, irritating winds, rendered more hurtful to invalids by the heat of a powerful sun." Neither is the climate of Rome so warm and genial as I was led to suppose; there is at times a balminess and softness in the air, which is very grateful, but it is subject to sudden transitions of temperature,

besides, in winter there is more or less rain; yet, invalids who are here for pulmonary disease, tell me they are better in Rome than other residences, particularly those who have bronchial affections—dyspeptics and persons with nervous disorder, can not remain here any length of time without aggravating their complaints.

Among the distinguished Americans who are sojourning here this winter, are Dr. William Gibson, and Thomas D. Mutter, both former professors of surgery, from Philadelphia, the former in the University, the latter in the Jefferson school. Both of these gentlemen are fine representatives of American surgeons, and are receiving attention due their distinguished reputation. Within a few months, Dr. F. W. Sargent, formerly of Philadelphia, has come here to reside and practice his profession. He is highly appreciated by our countrymen, and if great accomplishments, industry, and kind attention deserves success, I bespeak for him a distinguished career as the American Physician in Rome.

C. D. S.

Feb. 22, 1857.

MY DEAR DOCTOR:—I have lately derived much benefit in the treatment of sprue from a solution of borax in glycerine, the former being in the proportion of one-third. My first case occurred in November last, some troublesome cases of excoriated nipple under my care have healed kindly under the same application; it is advisable, however, to teach the child to nurse through an artificial nipple, while cicatrization is taking place. Needham's has seemed to me preferable to any other. These cases have encouraged me to brush the solution over ulcerations of the os uteri, some details of which may be given hereafter. Never having seen the combination suggested in these cases, I mention it in the hope that it may prove useful on more extended trial.

Yours faithfully,

DR. STEPHEN-SMITH.

GEORGE T. ELLIOT, Jr.

Bellevue Hospital—Circular of the Board of Governors.—The following circular has been issued by the Board of Governors to the medical profession, for the purpose of calling attention to the advantages which Bellevue Hospital presents for the practical study of medicine. That New York has facilities for medical instruction far superior to any other city in this country, can be easily demonstrated, but heretofore such material has been difficult of access. It is very gratifying, therefore, to witness the liberal and enlightened policy of the Board of Governors, not only in throwing open the wards of this immense hospital to the free admission of medical students, but in issuing this circular, inviting the profession at large to participate in the advantages which it offers.

CIRCULAR.—For the purpose of making known to the American medical public, the means of instruction placed within the reach of students at the Bellevue Hospital, of the city of New York, the Governors and Medical Board of the said institution make the following statement:—

This hospital, under the direction of the Board of Governors of the Alms House, is a spacious and completely appointed building, arranged with special reference to the hygienic comfort of the inmates, and furnished with every means and appliance for the treatment of the sick. It is situated on the East River, between Twenty-sixth and Twenty-eighth streets, having for the western boundary of its ground the First Avenue. Its locality thus secures for it the two great desiderata—isolation, and abundance of pure air. It is now undergoing alterations, soon to be completed, by which it will be made to accommodate fourteen hundred patients. The medical service of the institution is performed by a board of physicians and surgeons, four of whom are on daily duty, visiting the wards regularly at appointed hours, and affording to such students as may choose to take advantage of the opportunity, very rare facilities for the study of practical medicine, of pathological anatomy, and of surgery in all its branches. There is, also, a Lying-in Department, amply provided with material for instruction in the art of obstetrics. Between three and four hundred deliveries take place annually. In the hospital grounds is a very commodious building, lately erected in which post mortem examinations are conducted under appropriate superintendence.

The building also contains a lecture-room, capable of seating three hundred persons, in which demonstrations of morbid anatomy, in connection with pathology, are given by the lecturers on duty. Here, too, lectures on surgical anatomy and operative surgery, which are abundantly illustrated, are given. Over four hundred students during the past year were in attendance on the lectures of this institution.

The museum, already rich in valuable specimens, will be enlarged by future additions. Contributions to it, with histories of specimens, addressed to John W. S. Gouley, M.D., Curator, Bellevue Hospital, New York, will always be gladly received and placed in the museum to the donor's credit.

The internal service of the hospital is conducted by a house staff, composed of four house-physicians and two house-surgeons. Each of them is assisted by a senior and junior, in the performance of his duties; they are selected from such candidates as present themselves for examination before the committee of the medical board, the invariable rule being to choose those best qualified for the post, from the number examined. The house staff, residing in the building, is boarded and lodged gratis. No fee is required from students for attendance. To entitle them to the privilege of the hospital, it is only necessary to enter their names in a register kept for this purpose. To those who have attended a certain course of instruction, a diploma is granted, the fee for which (five dollars) goes to the support of the museum. The great want of American medical students is *clinical education properly conducted*. It is believed by the Board of Governors and the Medical Board, that Bellevue Hospital will do its share towards supplying this hitherto acknowledged want. They feel happy in being thus able to contribute to the cause of sound, thorough medical education for the sake of humanity.

Complimentary Resolutions.—We have before alluded to the admirable course of lectures on surgical anatomy, and the operations in surgery, delivered during the last winter at Bellevue Hospital by Dr. JAMES R. WOOD. The following complimentary, but merited, resolutions were passed, at the conclusion of the course, by the large class in attendance :—

NEW YORK, February 21, 1857.

DR. JAMES R. WOOD.

DEAR SIR :—At a meeting of the house staff and students of the several medical colleges, attendant on your instructions at Bellevue Hospital, held February 14, 1857, Bolling A. Pope, M.D., was chosen President, and John G. Johnson, Secretary, of the meeting. A committee was, also, appointed of two from each of the colleges, who, in connection with the officers of the meeting, should draft a series of resolutions, expressive of the feelings of the meeting toward you, which committee was to report at a subsequent meeting.

At a meeting holden this day, February 21, the committee reported the inclosed series of resolutions which were unanimously adopted.

I take great pleasure in forwarding them to you, representing as they do the sentiments of nearly four hundred students who have attended your clinics this winter.

I am, Sir, very respectfully yours,

JOHN G. JOHNSON, *Secretary.*

By the members of the house staff and the students of the several medical colleges in attendance on the clinical instruction at Bellevue Hospital

Resolved, That, while fully appreciating the valuable instruction and kind consideration received from the other members of the visiting staff lecturing at the hospital, the untiring and disinterested efforts of Dr. James R. Wood, who, bound by official ties to none, has labored so earnestly and so effectually for all, demands some special recognition on their part.

Resolved, That among those eminent men in the profession whom they have learned to honor, Dr. James R. Wood is entitled to place among the highest in their esteem and respect

1. Through the example he has afforded of devoted enthusiasm in the profession, and of indomitable energy in the promotion of its interests, which personal efforts and sacrifices have never wearied, and whose fruits they now enjoy in the legalization of practical anatomy, and in the facilities for pathological and anatomical study afforded by the pathological rooms at Bellevue Hospital ;

2. Through the demonstrative instruction he has given in the theatre and in the pathological room upon the patient and upon the subject—by concise and lucid lectures—by skillful grouping of cases, and by delicate operations in the higher departments of surgery ;

3. Through the inducements he has offered to the attainment of excellence in anatomical studies, by the establishment of munificent prizes open to unrestricted competition ;

4. Through the influence he has exerted in inducing and in cultivating sentiments of professional sympathy and regard, and by his own precepts and example in ignoring all invidious distinctions in honorable and recognized schools, receiving all alike on one ground of equality, fellow-students in medicine.

Resolved, That this series of resolutions, the joint offering of the house staff of the students in the College of Physicians and Surgeons, in the University Medical College, and in the New York Medical College, be presented to Dr. Wood in token that these things have not been unheeded or uncared for, but

have been treasured in memory to become in after life prominent among the more pleasing reminiscences of early study, and that even in this unsubstantial form their gratitude is real.

(Signed,)

BOLLING A. POPE, M.D., *President.*

JOHN G. JOHNSON, *Secretary.*

CHAS. PHELPS, H. G. COOKE, Coll. of Phys. and Surg. ; GEO. S. HARDAWAY, CHAS. M. CLARKE, Univer. Med. Coll. ; J. M. FARRINGTON, G. T. HOUGH, New-York Med. Coll.

RESIGNATION OF THE SENIOR EDITOR.—With the close of the present fiscal year of the *Journal*, the undersigned resigns his editorial connection with the work ; and in taking leave of its contributors and subscribers who have raised it to its present position among the medical periodicals of the country, he would here record his acknowledgment of great obligations. As circumstances of a favorable character, relating to his duties as a private practitioner, have required him to take this step, he is pleased to say that he still feels a deep and abiding interest in the success of the work. For nine years he has devoted all the leisure hours which could be obtained from active practice to its pages ; and if at all times it has not shown an amount of editorial labor pleasing to him, it has had, at least, the merit of receiving a support from contributors unequalled in the history of medical journals in this city. In regard to its future management, he is happy to state that the proprietors have secured the editorial services of his able colleague, DR. STEPHEN SMITH, with whom for several years past he has been associated, and who has now at his command elements of success, which secure for the *Journal* a future equal to what its warmest friends have ever hoped.

S. S. PURPLE.

The connection of the subscriber with the *New York Journal of Medicine* has been of so short duration, that a notice of his withdrawal from its editorial management would seem hardly to be called for.—He deems it but justice to himself, however, to say, that this connection was intended on his part to be but temporary, and to continue only so long as should be required to effect an arrangement which should promise to be both permanent and satisfactory. Such an arrangement he believes to have been secured ; and that, in the hands of DR. STEPHEN SMITH, upon whom the sole editorial responsibility devolves, the *Journal* will continue to merit that large share of the confidence of the profession which it now enjoys, to which the talent and labors of Dr. S., in connection with the devotion and perseverance of DR. PURPLE, its senior editor, have so largely contributed. He withdraws with feelings of warm interest in its success, and will labor with pleasure for its advancement.

H. D. BULKLEY.

OBITUARY.

DEATH OF DR. E. K. KANE.—The committee appointed at the meeting of the Academy of Medicine for March, to prepare suitable resolutions respecting the death of Dr. E. K. KANE, reported on the 3d of April. Dr. J. W. FRANCIS, the Chairman, stated that, since the Academy had done him the honor of appointing him to this duty, he

had departed from his usual manner, and had prepared some imperfect expression of his feelings. Dr. FRANCIS proceeded to read as follows:—

As a member of the committee appointed by the Academy, to offer for your adoption, should they meet your approving decision, resolutions on the death of the late Dr. ELISHA KENT KANE, I can scarcely withhold a remark or two on this melancholy occurrence. The occasion is one of profound consideration; the lamentable fact of his early death has now become widely known; and wherever known, is regretted with a sorrow that has scarcely limitation, and is felt as almost a personal bereavement. The expressions of that grief have been already diffused throughout our vast Republic; and never has an individual character, unassociated with the dignities of high official station, received loftier commendation from the National voice. His death seems to have reached the hearts of the entire American people, and will, doubtless, be sympathized with by the wise and the good of the Eastern world. I consider the late Dr. KANE to have been one of the most remarkable men of his time, and to have already been recognized as such. His physical and mental energies are hardly to be found recorded on the ample page of biography. With a constitution singularly delicate and refined, with a corporeal development that gave no special tokens of great muscular strength, of a size below the ordinary height—slender, susceptible, and of quick movement—he evinced a power and capacity for laborious service, and marvelous endurance in trial, beyond that which the stoutest and the strongest have shown. Though what might be popularly called a diminutive man, he was of fair proportions, of compact elements, comely and attractive in appearance. I betray in no wise the confidence and friendship, when I state—what I derived from his own lips, just before his last departure from New York—that his greatest weight had been ninety-seven pounds, and that during a portion of his Arctic career it did not exceed ninety-three pounds.

His intellect was of a peculiar order—alert, rapid in combination, and of a large forecast. He was analytic and synthetic. His range of thought was wide, his combinations singularly immediate. The simple and the compound were equally open to his perceptions. Early disciplined in the schools of literary and scientific instruction, with such faculties, his acquisitions were great and various. To a fair scholarship in the ancient languages, he added the sciences of astronomy, navigation, natural history—in its several relations of botany, mineralogy, geology, chemistry—and the department of physics which fall within the compass of a liberal medical education. He was an artist; he was an ethnologist. He was a searcher after truth, an explorer of the mysteries of nature, and periled life in his devotion, with the daring of a soldier and the stimulus of a scientific adventurer. He studied philosophy as the handmaid to useful purposes. His confidence rarely halted, however surrounded with difficulties. On the contrary, unexpected occurrences were no obstacles, but met with new devices, and assurances of hope presaged in the midst of conflicting issues. He was a mighty traveler; had seen men and cities widely remote; had borne vicissitudes of divers climes, and miraculously survived the assaults of pestilence in its most hidden forms. China, India, and Ceylon, the Pacific and her isles, Egypt and the Nile, loathsome Africa, lovely Greece,

Mexico and her antiquities, were his preparatory trials. Nothing that unfolded the handiwork of nature was ever indifferent to him. He contemplated a pebble—he surveyed a pyramid. He was a disciple of God's garden. It was rare, indeed, that you encountered an individual of his cosmopolitan experience. His conversational talents were most engaging; terse in description, and sententious; prompt in utterance, and discriminative; he secured an audience at will, while the convictions of his own belief, and his ample knowledge, led captive the auditor of his eloquent logic.

As his speech was glowing, so too we find his writings; clear and vigorous, united with a bewitching rhetoric, at once enlarging our comprehension and fathoming the heart. No writer of fiction has assumed a finer sentiment than he betrays in his narrative of the Arctic explorations. His work has become a fireside companion, and the icy world grows familiar as the parlor story or the devotional hymn. Youth forsakes his school-boy recreations to study its astounding incidents, and listening old age marvels how long it has been kept ignorant of the wonders of Providence. Tears are shed at the record of his multitudinous hardships—how many have burst from his own anguished eyes at the sufferings of mortals he has met amid the vicissitudes of his adventurous life.

DR. KANE was too guileless to be able to conceal the benevolence of his nature, and his manly sensibility gushes forth spontaneously whenever the noble instincts of humanity are summoned into action. I am told he was a rapid writer; that he sequestered himself, after his last return, within the apartments of his library, greatly to the detriment of his already-wasted health, in order to bring forth his captivating volumes, at a brief summons, for the gratification of an anxious public; and it is wonderful to think that while in the Arctic regions, with all its horrors, with his disabled crew, and himself wearied and the victim of disease, he could have penned such beautiful thoughts, so abounding in imagery and in description, always subjected to a harmoniously religious meditation. How eminently practical he was in every need, in every reverse! How admirably he preserved the integrity of those three special rules which he adopted upon his embarkation! They were rigidly adhered to, through all the vicissitudes of the expedition. He adds, "We had no other laws."

I have spoken of his physical powers and of his intellectual qualities; let me glance at those of the heart. That organ, which I may say constitutes the microcosm of man in his social state, in DR. KANE was, by nature, tender and devotional, and, by culture, had become possessed of the great elements of christian philosophy. Modesty and humility found favor within his breast. With a fortitude and a perseverance that would have entitled him to the admiration of a Zeno, he had the winning simplicity and tenderness of the gentler sex. In his most familiar converse, no word dropped from his lips at which even fastidious modesty could be annoyed, and to his own transporting achievements he rarely made reference unless to satisfy the curious inquirer; for, be it understood that the interests of humanity far outweighed, in his generous bosom, commercial extension or geographical knowledge. The

plaudits of mortals were less in his estimation than the approving smiles of heaven. He was in the amplest acceptation of the term a philanthropist. While memory retains her seat, so long shall I cherish the recollection of his enthusiastic utterance to his noble friend Henry Grinnell, in reference to the then still hopeful prospect of the recovery of Captain Franklin and his companions. It yields untold comfort to my anxious mind, involved in the cares of professional toil, sometimes to remember that while a child I had seen Alexander Mackenzie, the first white man who tracked his way across the Rocky Mountains, and gazed upon the Pacific Ocean; that I cherish a personal knowledge of Captain Franklin and his companions and biographer, Dr. Richardson; and that KANE, our American explorer, who was the first who came within sight of the great Polar Sea, can be recorded as a personal friend.

The eloquent and able eulogist, the Rev. C. W. Shields, in his thoughtful and appropriate address, at the interment of Dr. KANE, has beautifully said, "Let us believe that a faith which supported him through trials worse than death, did not fail him when death itself came." Another intimate friend of Dr. KANE thus expresses himself:—"But above all, governing and guiding all, there was a spirit of true christian benevolence and christian dependence. This it was that nurtured and sustained him in times of his greatest suffering and anxiety; this it was that gave him firmness, confidence, and power, before which the modest spirit bowed." Testimony abounds that, though weakened and worn to an extreme degree, his mind rose superior to his physical sufferings, and preserved his faculties entire; that he was conscious of his approaching end, and prepared for the change. His christian confidence wavered not; the benignity of his nature was edifying throughout all his sufferings, and one of his very last expressions was, that he held in little estimation that man who was afraid to die. Dr. KANE adds another imperishable name to the long catalogue of the members of the noble faculty of physic, who, in their lives and in their deaths, have enriched the panoply of faith by labors in humanity, and who, by their writings, have demonstrated the excellence of the christian's hope.

The following resolutions were then presented by Dr. McNulty:—

Resolved, That while the nation recognize, in the explorations of Dr. KANE, services honorable to the country and auspicious to humanity, we, his professional brethren, deplore his early death, as a loss to our entire profession, of which he was one of the most distinguished ornaments.

Resolved, That the benevolent enterprise, and the scientific enthusiasm he so nobly manifested, are the great principles of action which sustain the character of our profession, and reflect glory on its members.

Resolved, That the self-devotion, assiduity, and moral courage of the navigator, were combined in him with the human sympathies and the subservient study of the philosophic physician.

Resolved, That the valuable contributions to natural history, to navigation, astronomy, and the laws of hygiene, as affected by the extremes of climate, made by Dr. Kane in his Arctic researches, and their deeply interesting record, place him among the most eminent cultivators of practical knowledge on the roll of modern physicians.

Resolved, That while we honor him as a man, we mourn him as a brother, and deeply sympathize with his afflicted family, to whom, in token of sincere and respectful condolence, a copy of these resolutions be transmitted.

JOHN W. FRANCIS, M.D. A. CLARK, M.D. J. McNULTY, M.D.

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